International Handbooks of Population 6

Michael J. White *Editor*

International Handbook of Migration and Population Distribution

Springer

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Volume 6

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International Handbook of Migration and Population Distribution

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ISSN 1877-9204 ISSN 2215-1877 (electronic)
International Handbooks of Population
ISBN 978-94-017-7281-5 ISBN 978-94-017-7282-2 (eBook)
DOI 10.1007/978-94-017-7282-2

Library of Congress Control Number: 2015953217

Springer Dordrecht Heidelberg New York London

Printed on acid-free paper

Springer Science+Business Media B.V. Dordrecht is part of Springer Science+Business Media (www.springer.com)

Contents

Introduction: Contemporary Insights on Migration and Population Distribution

1

Michael J. White

Migration matters. In the twenty-first century, migration—as one of the three fundamental components of population change—arguably occupies a more consequential position than ever before. Many populations have travelled far down the path of the conventional demographic transition and so are characterized by low to moderate fertility and mortality. Thus, migration in many instances plays a larger role in population change than ever before. Processes of globalization and internal economic development have prompted the redistribution of populations, both within and across nations.

Recent meetings of scientific societies devoted to the study of population show evidence of a substantial number of sessions devoted to population distribution (segregation, poverty and place, settlement patterns of immigrants, and availability of services) and population movement (authorized and unauthorized international migration, rural-urban migration, and socioeconomic development) along a wide array of specific topics. At the same time, advances in analytical methods and in data collection have enabled scholars to examine both populations in place (with improved geographic technology) and populations moving across places (with more sophisticated data collection formats), so as to give better answers to long-standing questions: *Who lives where? Where do they move? How does it matter?*

Figure 1.1 presents just some of the major international migratory flows that have crisscrossed the world in the current period. Would that we could add to this a depiction of the major internal flows of migration, as well. Certainly the movement from rural to urban areas would emerge for many countries. Although in decades past, some researchers periodically bemoaned the lack of attention to migration, present circumstances suggest that population distribution and redistribution occupy—front and center—the attention of a broad range of scholars and policy makers.

The contributions of this volume are designed to examine and report the state of knowledge with regard to migration and population distribution. The volume's contributors are located in places as geographically broad as the subject matter itself. This collection brings together distinguished scholars from a variety of disciplines around the world to examine populations in place and population movement.

In many chapters, contributors have endeavored to treat both internal and international migration. While there are many similarities between internal migration and international migration, at least from the analytical stance of social science, the two literatures have developed somewhat separately from one another. With this

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_1

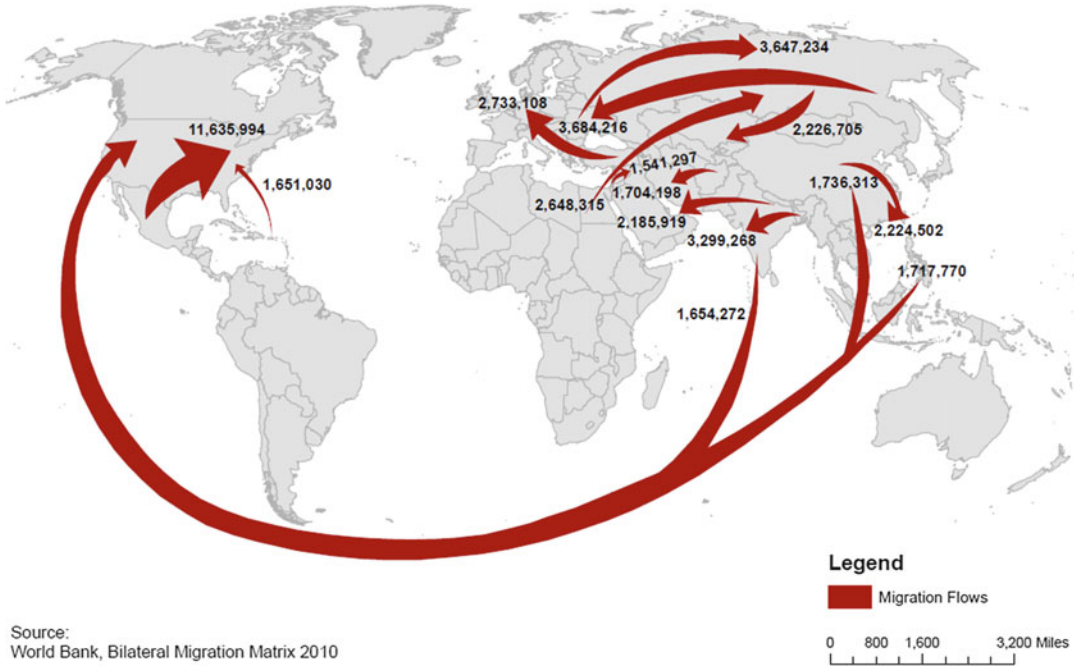

Fig. 1.1 The world's top 15 bilateral migration flows (Notes: Top 15 bilateral flows of lifetime migration calculated from World Bank data. Graphic by Fartun Dirie)

volume, the reader can see both internal and international migration well represented and can form an opinion about how much similarity exists. Contributors train their lenses on theory, methods and data, regional perspectives, and a series of policy issues related to population distributions. These four topical areas constitute the major part of this *Handbook*.

Part I of the *Handbook* is devoted to issues of theory. Wright and Ellis begin with the perspective of geography. Spatial considerations are fundamental to the topic of this volume. Wright and Ellis hearken back to the classic writings of Ravenstein in the nineteenth century, trace through some key conceptualizations of the twentieth century, and address several contemporary issues facing the field. They take note of the challenge of integrating the study of internal and international migration, the issue of mass migration, and role of gender. They conclude by discussing new opportunities in the study of migration, and they raise some associated issues for training in the discipline of geography.

Greenwood follows with a chapter dedicated to the economic perspective on migration. He notes the shift from an early descriptive approach to a preponderant concern with behaviorally causal models of migration. To this end, more recent treatment of migration includes recognition of geographical relocation as an investment decision (for the potential migrant) and reliance on models that incorporate search theory. Greenwood also notes that migration can be viewed from the point of view of the individual (migrant) or from the point of view of the region, and argues that while there has been substantial attention to the former, especially in the case of the assimilation of international migration, the study of the regional consequences of migration remains somewhat underdeveloped.

Brettell offers an anthropological perspective on the subject. She points out the shifts in orientation to the study of migration that have characterized more recent developments in the field of anthropology. More specifically, she comments on the fluidity of culture and community and the increasing attention given to agency

as scholars attempt to discern how migrants make their way in a new setting. Quite notable in this new approach is the concern for cross-cultural encounters. And Brettell takes the reader back to geography, as well, when she recognizes the importance of distance in contemporary anthropological discourse regarding migration. Brettell concludes by bringing together thoughts about the relationship between internal and international migration in this theorizing and offers thoughts about new developments (increasing concern for geography itself) and subjects (migration and health, human rights) deserving of increased attention from anthropologists.

White and Johnson join sociology and political science in their chapter. While migration studies have a long history within sociology and within social demography in particular, the subject occupies a less recognized subfield in political science. At the same time, political science has much to offer, examining migration and population distribution at both the micro and macro scale. The authors' treatment of the contribution of political science takes up the role of the state and discusses the concern within political science to understand how states can change policies to incentivize or even "control" migration. From the sociological side, the chapter emphasizes some of the more recent attention given to non-pecuniary aspects of migration, discussing in particular the rapidly growing literatures on social networks and on the adaptation of migrants (be they international or internal movers) in their destinations. White and Johnson conclude with a look at new directions, reviewing some of the largest world-wide flows of persons and the implications they present for sociology and political science.

Brown and Bean conclude the theory section with an innovative chapter charged with the task of thinking about the relationship of the study of internal migration to that of international migration. These two strands of the study of population movement have progressed with only modest communication with each another. What then does this imply for the future of a world where the movement of information—and often persons—across geography is often swift and substantial? Brown and Bean answer by arguing for a reconceptualization. They review the treatment and typologies that have been offered regarding human migration, and then tackle the issue of bridging the apparent gap. They argue for recognition of a decline in the importance of the cleavage of international national boundaries in the face of a new cleavage—a division between authorized and unauthorized migration. Tapping into matters of citizenship and political science, Brown and Bean argue that the re-conceptualization along the dimension of belonging versus not belonging would offer new, exciting, and highly promising lines of research.

Part II of the *Handbook* turns attention to data and methods. The study of migration is notable for its simultaneous interest in—and deep need for—data on time and space. Bilsborrow opens the section with a thorough review of concepts, definitions, and data collection approaches. He points out that even as migration and redistribution are growing as a factors in demographic change, the state of existing data for internal and international migration has many deficiencies. Bilsborrow takes note of some of the particular conceptual and empirical challenges of dealing with migration. After reviewing (and critiquing) some practices observed in contemporary surveys and typologies, he reviews existing sources of data, complementing a discussion of the present-day limitations with suggestions for improvement. He offers concrete examples from several important on-going population surveys. He also deals with issues with respect to sampling in migration surveys, problems arising from migration of whole households, the problematic gathering of data on reasons for migration, the validity of information gathered from proxy respondents, the promise of contextual data, and the prospects for harnessing "big data" for migration studies.

Sobek's chapter emphasizes the value of the International Integrated Public Use Microdata Samples (IPUMS-I) for migration work. As many researchers know, the IPUMS-I group has been gathering and promulgating microdata from national censuses (and some other sources) from

around the world. The collection is now extensive—amounting to more than 500 million person records—from cooperating countries. What is more, the IPUMS-I staff takes pains to harmonize these data, i.e., make them as comparable as possible. Sobek's chapter examines the migration variable specifically, and gives attentions to related variables often of interest to migration researchers. Sobek's chapter includes several background tables and figures that provide an invaluable reference to what kind of information is available for individual countries. The chapter also contains several empirical examples, illustrating—the tip of the iceberg—how valuable is the IPUMS-I as a resource for migration scholars.

Beauchemin and Schoumaker follow this with a chapter devoted to methods for longitudinal microdata analysis. They first present an invaluable short history of longitudinal or biographic approaches to migration. Mindful of how the importance of how the analyst conceptualizes time, they present a comprehensive review of types of longitudinal data, and call attention to their advantages and disadvantages. They press on to discuss issues of community and context, aspects of present-day migration research that have garnered increasing interest while being examined with increasingly powerful analytical approaches. They peer into the future, suggesting new approaches and opportunities for working with longitudinal microdata. These include such extensions as linking migration histories across individuals and integrating data on destinations.

Bocquier contributes a chapter that distills the lessons learned from two major sources of data: Demographic and Health Surveys (DHS) and Health and Demographic Surveillance Systems (HDSS), especially from the vantage point of longitudinal data analysis. The DHS is a very well-known source of nationally representative survey data, generally focused on developing nations. It has seen extensive application to studies of fertility and health, and typically includes longitudinal microdata in retrospective form. HDSS are prospective data collection platforms, again located preponderantly in lower income countries and often set up with a health mission. Bocquier examines both of these extensive data sources, but again with an eye toward their utility in migration studies and with considerable concern for methodological precision. Bocquier's chapter reveals some of the novel applications that have come through exploiting DHS and HDSS data, and points to some of the additional potential of these sources and approaches.

Willekens concludes this section of the collection with a chapter devoted to issues of measurement and modeling of migration flows. Willekens begins with a non-technical introduction to the issue of migration modelling. He reviews some critical conceptual issues on migration measurement and then turns to the structure of the flows themselves. Willekens is particularly attentive to the matter of origin-destination flows, a key characteristic of any migration system. Willekens's contribution includes a pertinent synopsis of the current understanding of age profiles of migration, and he concludes by looking to the future in an increasingly migratory world.

Part III of the *Handbook* concentrates on world regions. Standard regions are covered, with separate individual chapters devoted to the two most populous countries, China and India. Mberu starts off the section with a look at Africa. He discusses the very dynamic and complex features of African migration—across a large number of nation-states and a very substantial and diverse territory. For the African setting, Mberu takes particular note of the issue of circular migration, the urbanization of poverty, the feminization of migration, and the role of forced migration. In addition to internal migration, Mberu takes up the issue of international migration within the framework of brain drain, a topic of long-standing concern within the region. Echoing issues raised in the chapter by Brown and Bean, Mberu concludes with a discussion of unauthorized migration, a phenomenon that presents significant issues for policy in the region.

Charles-Edwards, Muhidin, Bell, and Zhu then examine migration in Asia, concentrating on the more than 50 countries outside of China and India. These numerous countries are

substantial in overall population and generate crucially important flows of persons internally and internationally. The authors touch on theory to orient their chapter, and then review the major migration systems that characterize the region, noting both their historical origins and the present-day composition of the flows. These co-authors then turn to internal migration. After echoing some of the concerns regarding measurement challenges discussed elsewhere in the volume, they provide a comparative analysis of the intensity of migration in the region. Their conclusion notes the deep historical origins of many of these migration flows and also comments on the parallel determinants that drive internal and international migration.

Liang and Song take up the case of China, a country whose population contributes enormously to the count of the world's internal and international migrants. They first provide a historical overview and then engage a discussion of the enormous consequences of China's later-twentieth-century market transition on migration and population redistribution. Liang and Song lay out some of the consequences of the massive migration for those moving and those left behind. After treating internal migration and its correlates, they turn their attention to international migration involving China. They describe characteristics of emigrants and some of the forces promoting emigration, while also giving attention to the matter of return migration.

Kundu and Sawaswati provide a chapter on the other demographic billionaire, India. They offer perspective on population distribution that aligns with India's long-standing concern with development and urbanization, and they focus intensely on the issue of urban exclusion. Kundu and Sawaswati provide a review of policies surrounding urbanization in a range of Asian settings and then examine trends and patterns of migration and urbanization in India specifically. The chapter concludes by revisiting policy, discussing issues pertinent to developing a future urban strategy, and pointing out the important potential role of migrants in a globalizing economy.

Hugo, Wall and Young cover Australia and New Zealand, observing at the outset that they are arguably the two countries most influenced by international and internal migration in the world. They comment on data and conceptualization, and then recount prominent aspects of historical patterns of geographic mobility in Australia and New Zealand. The analysis not only relates the scale of migration into and out of (and within) these countries, but it also speaks to issues of the demographic composition of the flows. Notable in the chapter is the attention to visa status and, along those lines, some of the administrative decisions that drive observed flows. Hugo et al. then examine internal migration, noting that Australia and New Zealand have some of the highest levels of observed national internal movement anywhere. These authors conclude, provocatively and prospectively, by suggesting that these highly mobile societies can offer a laboratory for improving our understanding of migration processes more generally.

Raymer addresses Europe, for which the story of migration and population distribution is extraordinarily diverse, long-standing, and complex. Raymer fleshes out this diversity by providing a historical backdrop focused on the latter half of the twentieth century. Policy changes in the European Union, particularly those liberalizing the movement across borders, have dramatically impacted migration flows. This chapter makes use of harmonized estimates of migration flows, developed with newer methodology, to help tell that story. Raymer's analysis of the flow data, much of it accompanied by graphics of the flows themselves, helps illuminate this story and reveal some of the dramatic differences between in- and out-movement for particular countries in Europe.

Lopez-Ramirez and Sanchez-Soto's chapter on Latin America examines a region in which many of the countries have gone from being destination countries (in the nineteenth and early twentieth centuries) to origin countries. Lopez-Ramirez and Sanchez-Soto provide a review of the historical evolution of Latin America's complex migration pattern, and then

look at major contemporary flows, including the movement to Europe. The chapter provides valuable insight on international migration within Latin America, something that has picked up with changes in transportation and communication technology and overall globalization. Similarly, such forces operating on the region's internal migration have produced a decided shift to the cities. Lopez-Ramirez and Sanchez-Soto analyze the composition of these migrant flows, describing some particularly noteworthy differential patterns by gender and destination. After a discussion dedicated to the dominant case of the U.S.-Mexico migration system, they offer concluding thoughts about vital topics for future migration research in the region.

Spring, Crowder, and Tolnay wrap up the section on world regions with a study of North America. They provide an analysis of the main historical and contemporary patterns of geographic mobility in the United States and Canada, another two of the world's highly mobile societies. The co-authors underscore some of the major demographic variations in the propensity to migrate, reviewing variations by age, education, and race, and noting more specifically how some of these differentials are linked to particular kinds of geographic mobility or destinations. They track some of the major features of population redistribution, from the initial urbanization that accompanied the industrial revolution, to the Great Migration out of the U.S. South, through counter-urbanization, to even more recent patterns of ex-urbanization and return to the city. The writers conclude with a reflection on this historical evolution, which has so decidedly shaped North America. In the end, they emphasize that migration is driven not solely by narrow economic forces but also by social and demographic conditions and the influence of political and social institutions.

Part IV of the *Handbook* turns to selected policy issues. Migration and population distribution permeate matters of policy, of course, but here the *Handbook* offers chapters that examine several contemporary concerns. Nauman, VanLandingham, and Anglewicz draw connections among migration, urbanization, and health. As a backdrop, they observe (as do several contributors) the dramatic net shift of the population from the countryside to cities around the world. These authors confront the central issue of selection: to what degree are any differences in rural and urban health outcomes attributable to rural and urban living per se, versus to the differential health circumstances of those who migrate? With that in mind, these writers review a number of studies around the globe that tackle the migration-health connection. They conclude their review of the state of knowledge with a discussion of particular challenges that researchers in this area must face as well as promising avenues of research with newer, especially longitudinal, data.

Hunter and Nawrotzki take up the connection between population distribution and the environment. As they note, there has been dramatic growth in interest in the relationship between migration and the environment. Attention has been directed to rural areas of settlement as well as urban areas, with both as origins and destinations. Indicative of the rapidly developing nature of the subfield, Hunter and Nawrotzki devote attention to terminology, frameworks, and methodologies, noting at the outset the interdisciplinary nature of investigation in this subject. They are keen to assert the reality of reciprocal effects, that is, environmental conditions may be both causes and consequences of migration. The writers offer an instructive discussion of understudied topics, and they conclude with observations on some contemporary disconnects between the state of knowledge and matters of public policy.

Dwyer and Sanchez turn their attention to poverty. As they note, the chance to find a better life has long been a spur to migration, both internal and international. Furthermore, poverty policies often have a population distribution component. The chapter reviews the relationship between population distribution and poverty, and recounts some of the methodological issues associated with that effort. Dwyer and Sanchez discuss the geographic distribution of poverty, suggesting that world population redistribution

has added urban poverty to rural poverty. These authors resist the oft-limiting tendency to divide poverty research into separate urban and rural tracks; instead, they discuss the interdependency of urban and rural livelihoods. Dwyer and Sanchez conclude by noting that within the sanguine trend of declining world poverty there has accumulated evidence of increasing inequalities between and within countries, with accompanying concern about the persistence of poverty in some disadvantaged populations and places.

Glick and Park address the issue of assimilation. As noted throughout the volume, world population mobility, both within and between countries, is substantial and shows every evidence of continuing to increase in coming years. Glick and Park open by reviewing how particular attention has been directed to migrant and second-generation success. They provide an overview of the various and sometimes competing theoretical perspectives on assimilation, and they also express concern for the potential role of population selection in confounding analysis of immigrant outcomes. Glick and Park then consider the state of knowledge with respect to assimilation outcomes across a wide array of domains, including education, employment, and residential integration. This chapter discusses new immigrant destinations, a topic that has garnered considerable interest among scholars and policy makers in recent years. Glick and Park conclude with a reminder about the varied paths and factors that shape immigrant outcomes and the need, perhaps, for theoretical pluralism in understanding these varied paths.

Taylor and Castelhano examine remittances from migrants to their households of origin. For international migrants, these remittances contribute substantially to the international flows of funds and can offer appreciable resources in some low-income societies. This chapter stakes out theoretical territory, offering at the outset an idealized remittance experiment to set the stage for the empirically grounded discussion to follow. Taylor and Castelhano draw on recent empirical microeconomics to frame the issue of estimation of remittance flows. After synthesizing what has been learned to date from migration remittance impact studies, they conclude that it is difficult to develop firm conclusions, given that the impact of remittances appears to vary considerably by time and place. In their final section, Taylor and Castelhano point to several new approaches that would help clarify these impacts.

Giorguli and Angoa examine gender and migration. Migration has long been considered a male-dominated demographic behavior. More recently, however, analysts have turned increasing attention to the dynamic composition of flows and their gender mix over time. Giorguli and Angoa, with a special emphasis on Latin America, point out how interest has moved well beyond mere sex ratios of the flows themselves to incorporate considerations of the connections between migration and gender roles and the place of women in labor markets. Such work has expanded to include the links between migration and family formation and the role of migration in increasing women's presence in the public sphere. Giorguli and Angoa address directly the topic of the feminization of migration, a topic often under discussion in contemporary migration circles. They offer considerable empirical evidence on this point, discussing the heterogeneity across countries in the phenomenon, and in turn, its implications for family formation and structure. They review, for example, the differential male and female migration propensities to engage in Mexico-U.S. migration by life cycle stage. Giorguli and Angoa conclude by identifying several themes that are likely to bear on future research and policy.

Montgomery, Balk, Liu, Agarwal, Jones, and Adamo focus sharply on one particular subgroup of migrants, a group especially relevant to contemporary policy: adolescent girls who migrate to the cities. Migration for adolescent girls is fraught with risk, yet migration can also open up possibilities for advancement, benefitting the young women themselves, their origin families, and the economies of the places where they live. The coauthors conduct an extensive empirical analysis of the phenomenon, drawing heavily on dozens of microdata sources. In fact, this

chapter provides a welcome and impressive illustration of the research strides that can be made with IPUMS-I and DHS data, data sources described in other portions of the *Handbook*. The writers challenge some of the conventional thinking about the migration of adolescent girls. For instance, they find that there is little compelling evidence of material disadvantage for urban migrant girls. Conversely they point to some issues of concern. For instance, they find that many migrant girls have arrived relatively recently, and there is evidence that they suffer in terms of social isolation and access to schooling. The authors bring these findings together with the aim of informing policy-makers.

Reed, Ludwig and Braslow examine forced migration. A distinguishing feature of forced migration is the dramatic and immediate link between the phenomenon and policy; indeed, the ability to balance scientific inquiry with the policy demands of humanitarian response often presents a challenge for those in the field. These coauthors describe several types of forced migration, which range from conflict-induced displacement to human trafficking. They argue that maintaining a strict dichotomy between forced and voluntary migration is unrealistic. They present newly emerging issues in the field, for instance, the growing concern with the mental health of forced migrants, augmenting the original focus on physical health and survival. Reed, Ludwig and Braslow bring to the fore the issue of protracted displacement. While conventional conceptions of forced migration are premised on relatively short-term disruption on the way to a longer-term settlement solution, many forced migrants are in circumstances of prolonged displacement. The chapter concludes with discussions of data and some research issues for the future. The forced migration field is a particularly challenging one, as investigators face both significant practical hurdles and pressing ethical issues for research involving forced migrants.

Researchers from many backgrounds are likely to find this *Handbook* valuable. As with others in the series, this collection is designed as both a standing reference source and an entrée to current thinking in the field. Scholars working in the subject matters covered in specific chapters will benefit from the latest reviews and interpretations of their fields. Others moving from one area of investigation into a new one will find it invaluable to consult chapters relevant to their new fields of study. And up-and-coming scholars of migration will undoubtedly find the collection of immediate and continuing use, as they explore and then imbed themselves in this fast-moving area of population studies. The many contributors to this volume deserve deep appreciation for offering state of the art interpretations of theory, methods, and substance for migration and population distribution around the world.

As this volume was coming to completion, we learned that our colleague and contributor, Graeme Hugo passed away. Based in a leading country of immigration, Graeme was one of the leading lights of the study of migration. His scholarship not only contributed enormously to the understanding internal and international migration in Australia and New Zealand (the subject of his contribution to this collection), but his investigation took on a truly worldwide character. His analysis ranged from technical demographic examination of population movement to broad commentary on policy related to settlement. Those of us who continue to work on the movement of persons from place to place around the globe follow in his scholarly footsteps.

Part I

Perspectives on Theory for Internal and International Migration

Perspectives on Migration Theory: Geography

2

Richard Wright and Mark Ellis

Geography has a tradition of diverse scholarship and its subfield of migration studies is no exception. This enthusiasm for new conceptualizations and approaches was on display in Spring 2009 when scholars convened in Brighton, U.K. to participate in a conference entitled *Re-Making Migration Theory*. Most, but not all, attendees were population geographers. Some of the papers from the conference formed the core of a special issue of the journal of population geography – *Population*, *Space*, *and Place*. Russell King's paper looked back on geography's contributions to migration theory, examined current trends, and then identified future opportunities for migration research in geography. The subtitle of the *Population*, *Space*, *and Place* special issue, Transitions, Intersections, and Cross-Fertilizations, signaled both changing times and Geography's theoretical, methodological, and topical eclecticism; aspects of the discipline we will accent in this chapter. It also indicated that migration itself is particularly suited to interdisciplinary study. Indeed, many conferees made exactly this point; the interdisciplinarity of both migration studies and geography make them a good match.

This chapter builds expressly on some of the outcomes of that conference and the associated journal issue, paying special attention to Russell King's synopsis of the state of play in migration studies in geography (2012). We use those commentaries as this chapter's foundation and add our own views on migration theory in Geography, identify current trends in the discipline, and show where Geographers can continue to make vital contributions to migration studies in the near future. We frame our remarks using some much older commentary on Geography and migration.

Some surveys of migration theory in Geography start with the work of Ernst Georg Ravenstein[1]; in particular two papers he published in the *Journal of the Royal Statistical Society* (1885, 1889).[2] Few migration scholars in Geography before 1980, for example, paid any attention to gender in their analyses or used an innovative method of depicting migration flows, but Ravenstein's work had both. Instead of starting with Ravenstein then moving on, however, we use his laws to structure our chapter.

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[1] As do some other fields.

[2] This is where Russell King begins his retrospective but it is also, for example, the starting point for Michael Samers' own assessment of migration theory. It is also the place where graduate seminars on migration began in the department where we both earned our PhDs (taught by Dennis Conway at Indiana University).

M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_2

Scholars can be ungenerous about Ravenstein's "laws of migration" – laws and social science research rarely mix perfectly – and his model of migration is individualistic and a historical (e.g., Castles and Miller 1993; Samers 2010). For us, and King (2012), his work still reaches across the decades and touches significant portions of the migration research in Geography and related areas. By arranging our remarks around a set of these principles, we do not mean to suggest that his basic laws of migration apply unaltered or unfiltered to contemporary migration research in Geography. Instead, we accent the prescience of Ravenstein's observations by using them as entry points into a set of conversations about migration theory and scholarship in Geography.

This chapter has six main subsections built on Ravenstein's ideas. We acknowledge this is not a comprehensive list of his laws; Grigg (1977), for example, highlighted 11 and Samers (2010) chose to cite 7. We use these six empirical regularities that Ravenstein observed as prompts for broader discussions about migration theory in Geography, with occasional references to work in areas such as Regional Science. Furthermore, in each section we identify exciting research questions associated with these broad subfields. In this, we often draw directly on our own research experience, our own perspective as North American scholars interested in migration within and to-and-from the United States. Any literature review necessarily brings a point of view, and we want to be up front about ours.

We begin with a section entitled the Intensity of Migration. Ravenstein observed that short distance moves outnumber long distance moves and we leverage this observation to examine the ideas of distance decay and the gravity model in migration research. We note that although short moves internal to countries continue to dominate, migration research in Geography is increasingly interested in longer-distance/international migrations and their effects. While migrations have many causes, we next consider the specific role that economic forces play in migration and use this section to reflect on "the decision to migrate", occupational migration, and the migration effects of the Great Recession. The next section considers the relationship between migration and development, the Age of Migration (Castles and Miller 2009) and the so-called "mobilities turn" in Geography. A discussion of circulation and transnational migration (also very much a part of global flows) follows, which leads to a discussion of scholarship on gender and migration. Last, we comment on channelization and networked flows and the implications for understanding immigrant's settlement patterns, neighborhood segregation, and metropolitan divisions of labor.

We are attracted to the breadth and depth of migration research in Geography. The discipline's methodological and epistemological diversity has fertilized innovative perspectives on migration and the subfield is healthy. Our enthusiasm for migration studies in Geography, however, is tempered by what we see as closures and blind spots, especially with regard to graduate student training within the discipline in this subfield. We thus conclude our review with a few cautionary remarks about what we fear is a shift away from an open-mindedness that we have enjoyed so much in our professional lives as migration scholars.

The Intensity of Migration: Distance Decay and the Gravity Model

Ravenstein was among the first scholars to consider distance decay in migration. Distance decay is a fundamental principal in spatial interaction of any kind and here is Ravenstein hypothesizing that migration (interaction) declines with distance:

> "The more distance from the fountainhead which feeds them, the less swiftly do these currents flow" (1885: 191), and ". . .the great body of our migrants only proceed a short distance" (1885: 198) and ". . .migrants enumerated in a . . . center of absorption will . . . grow less with the distance proportionally". (1885: 199)

Waldo Tobler's proclamation that the "first law of Geography" is: "everything is related to everything else but near things are more related than

distant things" (1970 236) generalizes Ravenstein's empirical observations to any realm of spatial interaction. In terms of migration, short moves generally still predominate, but of course there are exceptions to the rule.

Not only did Ravenstein observe that distance mattered, he also found that migration was related to both the size of the origin and destination:

> In forming an estimate of displacements we must take into account the number of natives of each county which furnishes the migrants, as also the population of the . . . districts which absorb them (1885: 198)

Ravenstein was the discipline's first gravity modeler, a theoretical approach to spatial interaction that now is a key element of trade theory, transportation planning, and migration modeling (Stewart 1942; Zipf 1946). Within Geography, spatial interaction models have been part and parcel of the work on migration since quantitative methods made serious inroads into the discipline in the 1950s and 1960s (e.g., Hägerstrand 1957; Tobler 1970; Curry 1972; Wilson 1975; Fotheringham 1983). For example, Torsten Hägerstrand (1957), in modeling migration to and from a Swedish village, showed not only the relationship between migration and distance but also how individuals perceived distance logarithmically – so that a place ten times as far away as another was perceived as only twice as far. This line of thought helped Hägerstrand subsequently develop the concept of an information field, which he used mainly for theorizing innovation diffusion, but which applies to migration – it's direction, channelization, and sorting by class, occupation, and gender. These considerations echo this and other Ravensteinian laws and remain key areas for investigation in migration research in Geography.

Geographers recognize that migration is a time-space process and Hägerstrand pioneered work in this area of time geography (King 2012). Time geography is principally concerned with the mappings of movement over the course of a day, week, month, year, or lifetime and the intersections of an individual's path with others. Hägerstrand developed innovative methods of visualizing such time-space paths. Time-space measures, routes, and visualization are today, with the advent of new Geographic Information System (GIS) techniques and data, back at the forefront of work in Geography (e.g., Kwan 1998). Ravenstein, as a trained cartographer, was also concerned with what we now call visualization. It fell to Tobler (1995) to bring scholarly attention to this remarkable aspect of Ravenstein's contributions by highlighting a map entitled "Currents of Migration" (1885 183). We agree with Tobler that it is an extraordinary map (reproduced here as Fig. 2.1) for, as Tobler notes, Ravenstein makes absolutely no reference to it in his text. We do not even know what data Ravenstein used or how each flow came to be rendered. We can say, though, that like many of the principles Ravenstein detailed in his pair of papers, this map drives home the point

Fig. 2.1 Ravenstein's currents of migration

that flows are channelized and networked. It also clarifies why a spatial perspective, and even just mapping, stimulates thinking about spatial processes and can produce new insights into migration patterns, processes, and theory.

Returning to the basic notion of distance decay, given that most migrants move short distances, international moves remain in the minority and 97 % of the world's population resides in their country of birth (United Nations 2006). But we also live in an Age of Migration (Castles and Miller 2009), where rates of international movements have increased and certain countries, especially those in the Global North and certain oil-rich nations, host large foreign-born populations. Such flows and other international movements and connectivities have captured the attention of Geographers doing migration work.

For example, in fall 2011, the *Annals of the Association of American Geographers* put out a call for abstracts for a planned Special Issue on the topic of Migration. Annual meetings of the association now attract as many as 10,000 participants and the *Annals* is not only the flagship journal of the US discipline but also commands a global audience. Not surprisingly, the call for abstracts attracted applications from all over the world. In all, 142 authors (or teams) submitted proposals for papers (from which 33 were asked to submit a full paper for publication consideration). Of the 142 original submissions, the proportion seeking to submit a manuscript on a topic relating to international migration outnumbered those proposing an essay on internal migration by over three to one. An analysis of papers given at the 2012 annual meeting of the Association of American Geographers shows that presentations on international migration topics outnumbered internal migration topics by roughly 5–1. These samples typify patterns we find in journals and at other geography conferences. Migration research in Geography has trended away from studies of internal migration toward studies of international migration. Indeed, one no longer need specify *im*migration or *international* migration. The simple term *migration* usually suffices. Michael Samers' recent book (2010), by that title, serves as exhibit A. If near things are still more related than far things as Tobler's law suggests, then many scholars are more concerned with movements between places that are most distant, and most unrelated.

Geography, of course, is not alone in this tendency. At a recent conference in Seattle that focused on internal migration across the social sciences, co-organizer and historian James Gregory, analyzed trends in published work on migration across major U.S. social science journals. His research made clear the decline in papers on internal migration and the rise in immigration/international migration scholarship over the last two or decades. Another frame of reference, Brettell and Hollifield's synthetic text *Migration Theory*: *Talking Across Disciplines* (2000, 2008), failed to include a chapter on Geography and Migration in the first edition and while the second edition did have such a contribution, Susan Hardwick's otherwise highly useful chapter, sidestepped internal migration and privileged international migration to the U.S. (Hardwick 2008; cf. King 2012).

What has happened to research on migration internal to countries?[3] U.S. internal migration studies have faded within Geography though the related sub-discipline of regional science still has a vibrant tradition of research on this topic (e.g., Newbold 2011). Within Geography, the fraction of migration studies that is internally focused has shifted to national contexts outside the Global North. A significant portion of the research at the 2012 AAG meetings, for example, was on internal migration studies patterns in China. China's scale and rate of industrialization has been astonishing and has involved a massive relocation of people from rural areas to rapidly

[3] Following tradition in geographic scholarship on spatial mobility, our definition of internal migration excludes short distance intra-urban moves that better fit within the realm of residential mobility research. Internal migration moves people well beyond the range of their previous daily time-space geography whereas most local residential adjustments retain some overlap with this prior daily field of activity.

changing urban centers. Not surprisingly, this transformation has captured the attention of scholars across the social sciences including Geography (e.g., Chan and Zhang 1999; Sun and Fan 2011).

The decline in geographical scholarship on internal migration in the U.S. is a little puzzling when one considers the scale of internal flows relative to immigration. The U.S. foreign-born population is approximately 40 million but the number of U.S.-born residents who live outside their state of birth is more than double this number. The relative lack of interest in internal migration is not associated with the volume of flows but with rates. Immigration to the U.S. occurs still at a relatively high rate whereas the internal mobility rate has been on a 40-year decline (a trend we explore in more detail later). Perhaps it is also associated with the notion that internal movers do not face the same challenges nor generate the same differences in destinations as immigrants. We also live in different times. Conditions three decades ago, for instance, vaulted issues of space-economy restructuring, employment, and internal migration to the top of the agenda for many economic geographers. The absence of great economic upheaval, the diminishing mobility of the US workforce, and the rise of international migration and globalization drew scholarly attention to other sets of problems. The Great Recession might change this as one effect of the downturn was to depress rates of inter state and inter county migration (Cooke 2011). It seems to us that analysis of recent U.S. migration tendencies must be grounded in comparisons with what transpired in previous recessions as well as linking internal migration to direct migration from abroad.

It is foolish to argue that the smaller fraction of migrants that are international are less consequential for US social, economic, and political life than the larger fraction that are internal. Yet these internal movements have significant consequences for movers and places. To ignore them is to sideline a very important component of the socio-spatial dynamics of the US population. We therefore swim against the tide of research on international movement and reassert an interest in internal migration (Ellis 2012).

The Causes of Migration: Economics as the Main Driving Force

Ravenstein's claim, that the economy – in his time industrialization twinned with urbanization – is a driving force in migration, is hard to dispute. Conceptualizing how this force operates through locations and is contingent on individual characteristics has had a long and rich tradition in geographic research over the last 50 years. An early formulation of the decision to migrate articulated the concept of place utility in which the benefits of staying or moving depend on the relative utility of the current location vs. alternatives (Wolpert 1965; Brown and Moore 1970). When utility in alternative locations exceeds that in the current location by a critical threshold, people migrate. A key component of this utility is, of course, labor market conditions. Lowry's (1966) migration model asserted the idea that relative levels of employment and wage conditions directed migration; people move from places with low wages and high unemployment to places where the inverse of these conditions exists. These research ideas generated a stream of studies testing whether migrants respond to labor markets in ways consistent with these differentials (e.g., Greenwood et al. 1991; Greenwood, Chap. 3, this volume). Strands of this work explore the differential response of population subgroup, differentiated by education, age, and other key sociodemographic markers, to these conditions (e.g. Clark and Ballard 1981). In so doing, migration research in Geography started to graft insights from human capital theory onto their initial concern with place-specific conditions.

An alternative framing of place or location views it as a type of capital that constrains mobility or, if migration occurs, limits where people can go (Da Vanzo 1981). People build up ties in locations – social networks – that they lose if they move. Such location-specific human and social capital matters most for those whose employment is predicated on

a local client pool, built up over years of business. Moving sacrifices these local resources nurtured through years of reputation building through local networks (Ladinsky 1967a, b). Location specific licensing adds to the constraint on migration limiting the mobility of people in specific occupations to places with licensing reciprocity agreements (Pashigian 1979). Migration is thus conditioned not only by local labor markets and individual human capital but also by the locationally specific ties of particular occupations. A small stream of research investigates the intersection of occupation and migration through the prism of these locationally specific connections (e.g., Barff and Ellis 1991; Ellis et al. 1993). Migration researchers in Geography have not vigorously pursued ideas of locational specificity or fixity in recent years. Economic geographers, however, have warmed to a similar idea through the notion of untraded interdependencies, which refers to the interrelations between clusters of production in specific regional locations that prevents individual sectors within the cluster from relocating (Storper 1997).

While economic forces remain central in most theoretical framings of migration there has been a shift toward consideration of other objectives for moving (King 2012). In these formulations, place utility is expanded to encapsulate a wide range of cultural, environmental, and other factors that influence where people want to live. These "amenities" condition migration such that when people have economic opportunities in a variety of potential destinations they go to places where these amenities are abundant rather than scarce (Graves 1979; Nelson and Nelson 2011). For example, Morrison and Clark (2011: 1948) find that "Rather than being motivated by having their employment enhanced by internal migration, the majority of internal migrants of working age appear to be motivated by other goals. Employment remains important, but in most cases only insofar as the new destination enables its continuity."

Florida's (2002) idea of the creative class takes this amenity-led migration idea to another level by suggesting that talented people choose where to live primarily on the basis of these amenities. The subsequent clustering of talent in these locations attracts capital and generates innovation and thus promotes regional growth. Florida's notion is that skilled worker migration is, to borrow from Muth's (1971) metaphoric title, the chicken and not the egg (i.e., the driver of regional growth and not the response to it). Florida's supply-side conceptualization has not gone unchallenged. Scott (2010), for example, finds that engineers move in response to the spatial dynamics of engineering jobs rather than the specific set of amenities that Florida contends attract creative class types. There is a history of studies favoring demand side interpretations of migration *vis a vis* regional labor market conditions (i.e., migration as egg rather than chicken) (e.g. Greenwood and Hunt 1989).

Taking the Economy More Seriously

Although there is enduring interest in the interrelationships between migration and economic forces within Geography, it is undeniable that much of the attention of migration scholars within the discipline shifted in recent decades to topics on culture, identity, security, etc. The economy seems rarely to be the center of attention. But what better time to take the economy seriously than the present moment! The evidence so far on the economic downtown that has gripped much of the global north since the mid 2000s carries several implications for migration. Recessions dampen both internal and international migration. In the United States, immigration has diminished and may remain reduced if economic conditions in the US do not improve for a long period of time.

The wrenching industrial restructuring of the 1970s and 1980s precipitated the last major transformation in the US space-economy. Looking back at the mobility responses to that crisis has value for the present day. Displaced workers in rustbelt regions faced a stark choice: either adapt in place to the shrinking pool of high-wage manufacturing jobs or migrate to more economically vibrant areas of the country in the South, South-West, and West. Many moved and, unsurprisingly, research on these

migrations flourished during this era. From our perspective, the most relevant work of that time answered questions about relationships between regional economic restructuring, the outmigration responsiveness of workers in depressed regions and the ability of these same workers to discern efficiently and correctly labor market signals about potential destinations (Clark and Ballard 1981; Ballard and Clark 1981). These sorts of questions about workers and their locational adjustments to the current transformations of the US space-economy precipitated by the continuing recession should be front and center of social science research.

Recessions have particular geographical signatures. Rustbelt deindustrialization hit the old industrial regions especially hard (Bluestone and Harrison 1982). Defense spending in the 1980s favored particular regions, spurring certain high-technology regions into prominence (Markusen et al. 1991). The 1991–1992 recession was generally "coastal", notably affecting high wage service sectors like finance insurance and real estate; the 2007-present recession is different: this downturn and subsequent slow-growth recovery is not just a perturbation like the recessions of the past 20 years. The current crisis represents an opportunity to refocus that attention on contemporary transformations of the US space-economy and how they might be affecting geographies of employment and migration. The theoretical and methodological insights offered by previous research on recessions present an important guide for any contemporary project on these issues. The recent crisis and its aftermath are different, however, and this may limit the transferability of prior knowledge. The recession of the late 2000s was deeper than almost any earlier depression and it did not have a clear geographical epicenter. A few places escaped relatively unscathed (e.g., the upper Great Plains and it's rapidly expanding extractive industries), but most did not. In some respects, we are now in uncharted territory, with unknown space-economy transformations ahead. The events that started to unfold in late 2007 may represent the start of potentially transformative shifts in the US space-economy that could yield a new geography of regional haves and have-nots (Florida 2009).

This recession and its aftermath have hit immigrants especially hard. Many immigrants, because they worked disproportionately in sectors contracting the fastest, such as construction, have lost work. Yet it would be premature to conclude that immigrants cannot hold their own – or even make employment gains – in such a poor labor market. For example, our own work shows how immigrants can continue to make headway in regional labor markets that are stagnant or declining. Immigrants came to New York and garnered larger shares of jobs there in the 1970s despite the area's poor economic performance. The key to this situation was the aging and outmigration of the city's US-born population, creating openings for younger workers from abroad (Wright and Ellis 1996, 1997). This replacement effect could continue in the current slowdown, possibly accelerated by the retirement of baby-boomers. It may be geographically uneven, however. New immigrant destinations tend to have younger US-born labor forces than in traditional gateways, especially among whites. The spatial distribution of replacement labor demand and the spatial pattern of growth that emerges from this recession will be crucial determinants of the settlement geography of immigrants, both as new arrivals and internal foreign-born movers, in the coming decade. Local and state anti-immigrant policies may condition these developments as immigrants seek out places which are more welcoming of difference (Parrado 2012).

Linking Internal and International Migration

Rising immigration raised questions about the economic impact of immigrants on destination labor markets. As this lies at the heart of the question of the employment and wage effects of immigrants on the native born, economists have paid close scrutiny to this issue. So have Geographers. Under the assumption that immigrants operate in the same labor market

segments as the native born and therefore compete for the same jobs, there should be downward pressure on native-born wages and employment. Native-born workers can respond to these pressures by migrating from sites of immigrant settlement leading to a suggestion that internal and international migration streams are linked through competition in the labor market. Complementary migration streams are also a possibility with highly skilled professional migrants moving to the same locations as relatively unskilled immigrants; the latter providing service labor for the former (Nelson et al. 2009; Nelson and Nelson 2011). The evidence on these linkages is disputed with some studies finding more support (Borjas 2001) than others (Walker et al. 1992; Wright et al. 1997).

The idea of internal-international migration linkage in the U.S. predates the current debates about the economic impact of contemporary immigration. It also extends beyond the U.S. to a range of regional and national contexts (e.g., Skeldon 2005; King and Skeldon 2010). Evidence from Australia and Canada suggests that high house prices not labor market competition has been the key factor in promoting native-born out-migration out of immigrant gateways (Ley 2007). In the U.S., the recession-led declines in immigration that started in 2008 raise questions about whether and how internal migration systems will adjust in response. After the last great surge of immigration in the early twentieth century waned, internal migration from the south to northern cities by African Americans and whites accelerated to substitute for the lost supply of new immigrant labor. Conditions now are not as extreme as conditions then by any means, but if the current stall in migration from Mexico to the US persists (Passell et al. 2012) it may be sufficient to generate a series of internal labor and production adjustments in specific parts of the country.

The Direction of Migration: "Development" and Mass Migration

While Ravenstein built his theories inductively, based on detailed observation of migration patterns from various censuses, other theorists have adopted deductive approaches. Ravenstein framed his laws from observing migration in late nineteenth century Europe and that migration, of course, was heavily rural to urban as new centers of industry emerged and older settlements industrialized. An obvious question about these flows is to place them in a broader context. That is, to wonder how they evolved and what the future would hold for societies undergoing rapid urbanization and population growth. One of the simplest ways of explaining population growth for places that are rapidly developing is to turn to the demographic transition model. In the early 1970s, Wilbur Zelinsky (1971) expanded on the particular moment when Ravenstein made his observations. Zelinsky generalized migration patterns and development in a "mobility transition" model. He thus extended the implicit rural to urban component of the demographic transition approach to consider how development engenders rural to rural flows, urban to urban movement, as well as new international mobilities.

Zelinsky made the general point that types of migration vary systematically over time (King 2012; Skeldon 2012: 157). Put differently, the demographic transition was concerned principally with changes in mortality and fertility, two of the mainstays of demography, to which Zelinsky added the other – migration. Building explicitly on Ravenstein's laws of migration, Zelinsky was intrigued with what he called "the fusion of the spatial with the temporal perspective" (1971: 220). Accordingly, he attached a mobility transition to each of the five stages of the demographic transition:

Phase 1: Pre modern Society: high fertility and mortality associated with low rates of mobility.

Phase 2: Early Transitional Society: declining mortality and population growth associated with rural to urban migration, emigration to certain places, growth in circular migration, and movement to frontiers.

Phase 3: Late Transitional Society: lowered rates of natural increase associated with declines in

fertility and a slackening decline in mortality was linked to continued, but slowed, rural to urban migration, declines in emigration, and increases in circular migration.

Phase 4: Advanced Society: Stable population associated with continued rural to urban migration, but at much lower relative levels, high rates of urban to urban migration, high rates of residential mobility, the emergence of mass immigration to "developed" countries from "less-developed" ones, and further increased circulation (e.g., tourism, business).

Phase 5: Future Super Advanced Society: Mortality further reduced: decreases in migration as new means of communications introduced; nearly all international migration will be intra- or interurban; immigration of some unskilled workers to "developed" countries possible; strict political control of internal as well as international movements possible; both a deceleration of certain forms of movement and an acceleration of others as well as the inceptions of new forms of mobility.

Reading Zelinsky one can't help but have two very different reactions. One is that as a stage model concerned with modernization and development with distinct echoes of Rostow, Zelinsky's model was very much a "child of its time" (Woods 1993; Skeldon 2012). And like the demographic transition model, the evolution of migration and mobility was produced from the standpoint of events in countries in the Global North. To Zelinsky's enormous credit, within a few years he amended his theory (1983), acknowledging that what he described applied but narrowly to a select set of countries. Processes in what we now think of as the Global South may be fundamentally different and often depend on decisions by governments and corporations made elsewhere. Such critiques also expose the narrow determinism and the lack of spatial thinking embedded in stage models. Rather than an apology, one can also read this as a modification of his theory, joining patterns and predictions associated with the Global North to the evolving "dependency" theories at the time he was writing. Even on this score, it would be foolish to throw the baby out with the bath water. Contemporary research in Geography recognizes that the relationship between migration and development is critical. For example, many studies of remittances, skilled migration, and brain drain/brain circulation (Skeldon 2008) link migration to the socio-economic standing of communities, regions, and nations. For some communities, and even some countries, remittances provide a mainstay of the local economy. For other places, returning migrants inject vital human, social, and actual capital into the local economies stimulating economic growth.

The other reaction to Zelinsky is more generous. This geographer anticipated the impacts of telecommunications on migration and mobility. Zelinsky outlined a *mobility* as opposed to a *migration* transition, anticipating the advent of the "mobilities" paradigm more than two decades later (King 2012). He also predicted not only the evolution of mass migration to the Global North but also the political reactions to those movements in the form of greater control at both the national local levels. We briefly comment on each in turn from the vantage point of the US.

Telecommunications and Migration

The decline in migration rates stands as one of the most interesting and tantalizing recent trends in migration in the United States, and one has to wonder if the revolutions in telecommunications are part of the explanation. Mobility and migration are deeply engrained in US national culture. For many, the US stands not only as a nation of immigrants but also as a country of migrants. Immigration has recently begun to decline; in the short term, the recent recession has reduced the demand for labor and immigration has moderated. In the long term, changing demographics in Mexico, the primary country of origin, will likely lead to lower rates of migration from Mexico to the US. With regard to internal migration, the great recession has

depressed inter-state and inter-county mobility (recessions always do). A few geographers, noticeably Thomas Cooke, have begun to take a longer-term view and unpack the declines in migration rates that have occurred over the last few decades. Internal migration rates in the United States are now at historic lows. During year in the 1960s, over 3 % of the population moved between states and over 6 % moved between counties. In 2009, however, approximately 1.6 % of the population moved between states while only 3.7 % moved between counties (Cooke 2011 193). Moreover, the gradual decline since the late 1960s has accelerated in the last decade or so. Decomposing the change in migration rates between 1999 and 2009, Cooke attributes about 60 % of the decline to the erosion of economic fortunes in the period and about 20 to changing demographics such as population aging. Cooke assigned the remaining portion of this change to what he calls secular rootedness – a change in migration behavior that transcends standard demographic categories.

The Scaling of Migration Control

In almost every country of immigration, the control of flows of the foreign born is an important issue. The era of mass migration has produced new flow directions and, as Zelinsky predicted, increasing controls over who enters and where they can settle at both the national and local levels (Leitner and Preston 2012; Varsanyi et al. 2012). These new controls are often associated with an increased intolerance for newcomers, but not all statutes are unwelcoming. In the "variegated landscape" (Walker and Leitner 2011) of local immigration policies in the United States, hundreds of towns, cities, and counties have implemented local policies in the absence of what many see as an abdication of national-level initiative on the part of federal authorities. These policies can be either welcoming or unwelcoming. Walker and Leitner (2011) identified a clear geography to these policies. Places with limited histories of immigration (especially those in the U.S. South and outside central cities) and with high foreign-born population growth rates were more likely to enact exclusionary policies. Immigrant "gateways", however, places with long histories of immigration (Singer 2004; Singer et al. 2008), were more likely to declare themselves sanctuary cities and enact laws tolerant of immigrants. Many of these statutes target people in the country without authorization but in effect, tend to be scattershot such that many foreigners and Latinos feel their sting. In 2012 the Supreme Court reasserted federal authority over immigration in a few key areas. They blocked certain components of a 2010 Arizona law that criminalized individuals in the US without authorization who sought work. They left intact a provision requiring state law enforcement officials to ascertain the immigration status of anyone they stop or arrest if they have reason to suspect that an individual might be in the country without authorization. Accordingly, the opportunity for state and local authorities to assert themselves in immigration enforcement remains the law of the land.

The 287(g) program is one of the main weapons used by local authorities in the attempt to regulate the presence of unauthorized immigrants. This federal program, operated by the U.S. Immigration and Customs Enforcement agency, sanctions local law enforcement officers to arrest and detain people who are in the country without authorization. While the U.S. "border" no longer simply references the boundary separating the US from Mexico and Canada (Coleman 2007, 2009), scholars continue to acknowledge enduring federal authority via the examination of migration and citizenship, incarceration, and militarism (e.g., Nevins 2010).

While the theorization and interest in the spatial scale of immigration enforcement draws attention to geographical variation in immigration policing within a country, another aspect of immigrant detention is the geographical extension of the nation-state, extra-territorially. In a globally scaled project, Alison Mountz (e.g., 2011) highlights the ways offshore detention and immigration enforcement is dialectically related to "inshore" practices, internal to countries. Mountz invokes Ong's (2006) "graduated zones of sovereignty" to scale her analysis of sites that produce ambiguous legal

standings for asylum seekers and migrants. She argues that islands have become "key sites" in many systems of migration control and territorial struggle. Islands, as part of an "archipelago of enforcement" are used to "deter, detain, and deflect migrants from the shores of sovereign territory" (118). Her Island Detention Project shows that border enforcement has in certain places been reimagined and repositioned away from the perimeter of countries to an even more marginal location – offshore.

The Mobilities Paradigm

Mobility is much broader than migration. It concerns moving, and mobility studies seek to connect "forms of movement across scales and with research fields that often been held apart" (Cresswell 2011: 551). Tim Cresswell, one of the main proponents of mobility studies in Geography, goes on to observe that "increased levels of mobility, new forms of mobility where bodies combine with information and different patterns of mobility, for instance – combine with ways of thinking and theorizing that foreground mobility (of people, of ideas, of things) as a geographical fact that lies at the center of constellations of power, the creation of identities and the micro-geographies of everyday life" (2011: 551). Power, identity, and the everyday constitute prime research areas in Geography today. In addition to that, Cresswell points out that the mobility turn links research in the sciences and social sciences with the humanities (playing into the openness of Geography and links across scales of moving (a core concept in the discipline). As King (2012) also notes, it plays into themes that have long been of interests to Geographers – movements of bodies, goods and other things as migration, transport, trade, and tourism (144). Zelinsky's key insight was to suggest that new forms of movement – new mobilities – would accompany declines in older forms of movement.

The impact of new technologies of communication and movement attracts attention from researchers working in several subfields. Studies of transnationalism certainly feature the impacts on daily life of a newly connected global world. Cresswell warns about an uncritical focus on high-tech hyper mobility offered, for example, by air travel or the internet/new personal communication devices. He also points out that "transport geography, migration research and tourism studies, for instance, have all been vital parts of the longer history of the discipline that have informed and been informed by the recent turn to mobilities research. More recently the flowering of work on hybridity and diaspora and, specifically, studies of transnationalism and translocalism have necessarily involved serious consideration of the role of mobility in the constitution of identities that transcend a particular place of nation" (2011 553–4). These latter topics are the one to which we now turn.

The Variety of Migration: Circulation and Transnationalism

Another highlight of Ravenstein's pair of papers is that he observed that for every migration stream, a counter stream formed:

> Each main current of migration produces a compensating counter current (1885: 199)

We find here, then, the conceptual roots associated with migration fields (e.g., Hägerstrand 1957), circulatory migration (e.g., Ellis et al. 1996), sojourning or temporary migration (Hugo 2006), returning (Conway and Potter 2009), and the burgeoning literature on transnationalism. King (2012 144) suggests that the transnational turn "has been the dominant paradigm in migration research" since the early 1990s (see also Brettell, Chap. 4, this volume). The assertion of this approach is another of the reasons for the decline in interest in internal migration.

Reintroduced into the literature by anthropologists such as Rouse (1991) and Glick-Schiller et al. (1992), transnationalism has roots as deep as Ravenstein's observation about stream and counterstream. A proportion of newcomers to the United States have always

moved to and forth between the place of the birth and the US (Bourne 1916). Mountz and Wright (1996) note that the "historical record is replete with examples of such connectivity." Nineteenth century circular migration between the US and Europe involved the disaffected and disenchanted, sojourners who returned, sometimes periodically, with savings accumulated in the United States to buy land in their place of birth or establish businesses. Returnees also carried religious and political ideas, skills, and know-how (Wyman 1996). Mountz and Wright go on to drily observe that "Bourne's article, now closing in on its centenary, entitled 'Trans-national America', also shows that some of the terms deployed to understand our changed reality are not new either."

Transnationalism resonates for Geographers for many reasons and is much richer than simple stream/counterstream. Early transnational research in Geography accented the daily lives of transnational migrants and how they organized their lives in two places at once. Births, marriages, celebrations, divorces, bereavements, and mourning all could be transnational. This extended beyond the social to political and economic realms and added interesting scalar dimensions to "international" migration (Mountz and Wright 1996; Conway and Cohen 1998). This type of research necessitated ethnographic methods and brought the spotlight to bear on issues of culture and identity and community and belonging. Transnationalism therefore also offered exciting theoretical possibilities. "A transnational critique of international migration . . . revolves around the way that positivist epistemology relies upon categories of analysis that are fixed, unable to take account of the co-mingling of economic and cultural processes, and unhelpful in integrating insights from different scales of enquiry" (Bailey 2001: 416). Transnationalism thus aligns well with the post-positivist epistemological trends in Geography. For example, Adrian Bailey concludes that from a transnational perspective, migration and mobility are conceived in ways that do "not rely on assumptions of fixity for the concepts of nation-state and territory so accounts of transnationalism can jointly theorize the roles of migration, community, territoriality, national borders, space, and so forth" (Bailey 2001: 425).

Gender and Migration

While Ravenstein made the point that economics is the main driving force behind most migrations, Samers notes (2010: 55) he was also careful to differentiate among different types of migrants, such as short distance, stage, long-journey, and temporary migrants. Ravenstein also differentiated migrants by gender:

> Females predominate among those migrants who go only short distances (1889: 249)

Ravenstein, who also noted that men comprise the majority of those who move internationally, did not explore these spatial relationships in any depth. In the last 30 years or so, however, geographers certainly have, albeit from a set of different theoretical and methodological entry points. More precisely, they link differences in migration and mobility to geographies of power, spatial scale, home-work relationships, and the links between place and identity (e.g., Chant and Radcliffe 1992; Silvey 2004, 2006; see also Brettell, Chap. 4, this volume). In other words, including gender in migration analysis is not simply about differentiating between male migrants and female migrants as Ravenstein did. Gender is now both a variable and a key concept for understanding migration. In other words, an overarching question is how our understanding of migration changes by accounting for gender. Gendered relations and inequalities within families, labor markets, and in all sorts of other institutions, have become a guiding framework for a large body of migration scholarship.

Ravenstein's empirical observations on gendered selectivity of migration by distance, with long-distance internal and international migrants being disproportionately men found general support through much of the twentieth century. This bias stemmed largely from the labor market transformations of the

industrialization era which brought women into the industrialized workforce and men disproportionately engaged in more long-distance moves, such as international sojourning. The growing feminization of migration flows has again been a striking feature of the last few decades (e.g. Morokvasic 1984). Increasing women's labor-force participation, increases in women's formal education and job skills, and gendered employment segmentation processes all play into this growth of female migration. As women have approached half of the formal labor force, and as their educational qualifications have risen to men's levels, women have become more likely to undertake long-distance migration to find jobs that match their labor market expectations.

In the last decade, geographers have become interested in skilled female international migration. This research erodes the notion that skilled movers are all men, and connects gender segmentation in employment to that of migration in the upper strata of labor markets (e.g. Kofman and Raghuran 2005). A larger body of work focuses on this interlinkage in the labor market for less skilled workers. Internal migrations within poor countries by "distress migrants", or international migrations from poor to rich destinations for basic service work, has distinctive gendered components wherein poor and marginalized women movers come to fill particular types of service jobs, often informal and casualized (e.g. Roy 2002; Dyer et al. 2009). A substantial component of these international migrations encompasses care workers, including nurses, home-care workers, nannies, and domestics (e.g. England and Stiell 1997; Dyer et al. 2008; Kofman 2012). The sourcing of these migrants from specific countries – and their encounters and experiences in work and life in particular destination countries – is strongly featured in this work, with Filipino/as getting much attention for their disproportionate representation in the international flows of care workers (Tyner 2007; Pratt 2012). The broader ideas surrounding geographies of responsibility and care, which serve to highlight the global webs of connections between peoples, provides an organizing framework for making sense of care migrations and their gendered dimensions (Massey 2004; Lawson 2007).

Care features in migration in other ways. Elderly parents and their adult children may come together to provide care for the former (e.g., Rogerson et al. 1997; Rogerson and Kim 2005) or for the latter (Ellis and Muschkin 1996). The gendered dimensions of this process are unclear; empirical work on the US suggests there is little measurable gender bias in locational readjustments of families to support the elderly. The process of migration to form families is gendered, however. Marriage migration selectively draws women to join men in particular locations through internal and international moves (e.g., Fan and Huang 1998; Heikkila and Yeoh 2010). This does not mean men do not move for marriage; they do, but their marriage migration fields do not necessarily overlap with women's (e.g. Niedomysl et al. 2010). Migration does not only lead to marriage. It also is bound up in union dissolution, with moving either raising the probability of separation or occurring after a separation (Boyle et al. 2008).

Family migration studies go beyond questions of family formation, break-up, and spatial mobility to examine the nature of migration decision-making when more than one person's interests are at stake. How dual earner households make decisions to move, and where to move to, when two jobs or careers are at stake, is a central issue in this line of research (e.g. Hardill 2002; Cooke 2008). A key question is whether these decisions yield differential monetary returns to migration by gender, measured through employment and wages. Some researchers find negative effects on women within families, suggesting that migration-decision making favors men in heterosexual families (e.g. Boyle et al. 2001). Others counter by showing that family migration may be producing fewer formal labor market returns for women than men because of moves to less expensive housing markets, which do not require two-earner households to sustain quality of life Withers and Clark (2006). But even in the latter case the outcome is gendered because presumably such moves are disproportionately made to release women from formal employment so they

have more time to perform traditional gender roles within the home, particularly in regard to raising children.

The Channelization of Migration: Migration Fields and Networked Flows

A final core theme we highlight from Ravenstein is the channelization of migration flows:

> Migratory currents flow along certain well defined geographical channels (1889: 284)

The ideas of beaten path effects (e.g., Massey et al. 1993) and networked migrations are now commonplace in this area of research. Much of the discursive framing Ravenstein deployed remains present in much contemporary research. We may not invoke Ravenstein's fountainheads in our analyses too many times, but the hydrological images of flows, streams, currents, and so on, remain the principal metaphors scholars use to this day. And Geographers are very interested in both methods and metaphors to describe these channelizations. For example, the spatial focus of a migration field describes the degree to which migration flows from an origin are evenly spread across destinations. Alternatively, spatial focus can be assessed for inflows to a destination. Low focus refers to the situation in which outflows from an origin (or inflows to a destination) are evenly spread over the relevant destination or origin possibilities. A degree of spatial focus occurs when outflows concentrate on a limited number of destinations, or in the case of inflows, come from a limited set of origins (Plane and Mulligan 1997; Rogers and Sweeney 1998).

A related assessment concerns the redistribution potential of locations through *migration efficiency*. This is the ratio of net migration to gross migration; a measure of the imbalance between stream and counterstream (Flowerdew and Salt 1979). A location with a large ratio (positive or negative) is an important node in the redistribution of the population – absorbing population when the ratio is positive, shedding population when it is negative. Effectiveness allows the analyst to compare migration loss and gain across states and groups of different sizes – something net migration cannot (Rogers 1990; Stillwell et al. 2000). Identifying "migration effective" locations for different groups and arrival cohorts through time illuminates the roles of different places in the mobility system of migrants.

Not all migration metaphors used in Geography are fluvial. For example, Fielding (1992) coined the term *escalator region* to describe places that disproportionately attracted upwardly mobile young adults via migration because of superior opportunities in these places. These opportunities provide for relatively rapid upward social mobility. During the later stages of their working lives or at/near retirement, a significant proportion of those who achieve these higher levels of status and pay, then "step off" the escalator via outmigration. Fielding's work is significant as it showcased the strong association between spatial and social mobility – a central issue in some areas of social science research, including migration. In a related vein, Roseman and McHugh (1982) introduced the idea of regional redistributor regions. They studied the metropolitan turnaround in which certain nonmetropolitan areas began to attract migrants at higher rates than some metropolitan regions. They hypothesized that metropolitan outmigration will be less focused than metro in-migration patterns. It follows that metropolitan areas can become geographical *redistributors* of populations because of the asymmetry of their in- and outmigration patterns. This occurs because while rural to urban migrations traditionally depend on kith- and kin-based ties, the reverse streams draw on a set of information derived from a broader base, including not only family and friends, but also those gained via tourism and other travel experience as well as previous residential experiences in nonmetropolitan places.

These lines of inquiry play into a broader social science discussion social networks about the flow of information that leads to the decision to migrate. More specifically, this links Geography to both Sociology and Economics especially, in that networks convey information and lower the cost of obtaining that information. As a

general model, pioneers (the risk takers) establish bridgeheads, and then later migrants arrive in a chain like fashion (and likely face lower risks and costs of migration). The initial migration is demand driven but later migration is supply driven in a cumulative causative fashion. Research interest in migrant networks built on information fields and flows are common themes in migration studies in Geography (see, for example, Mattingly 1999). These networks may be gendered (e.g., Wright and Ellis 2000; Parks 2004). They may also help produce and reproduce ethnic concentrations in neighborhoods and lines of work (e.g., Ellis et al. 2007; Wright et al. 2010). Recent work in Geography mirrors that in allied social sciences as it examines the role of migration in racial segregation and mixing in different locations, including the new U.S. South (e.g., Winders 2005), but also comparatively (e.g., Johnston et al. 2006; Holloway et al. 2012). The increasing attention paid to the role immigration plays in changing patterns of urban segregation and diversity parallels the trend to focus on the study of immigration over internal migration mentioned earlier.

Networked patterns then play out in space in several ways, producing particular routes and particular destinations. Some interesting research questions in this area center on how migration flows reinforce divisions of labor in destination communities, how intermediaries shape these patterns, and how these patterns shift over time and generation. Attention on intermediaries is growing as the behavior of states as well as private or non-profit intermediaries comes under scrutiny (e.g., Goss and Lindquist 1995; Ashutosh and Mountz 2011). The question of how these patterns change also includes older issues such as the metropolitan-nonmetropolitan turnaround, as well as the related phenomenon of counter-urbanization – the socio-spatial processes of people moving from urban to rural areas in certain contexts. Another, more recent, example is the emergence of so-called new immigrant destinations in the United States. These places signal the geographical diversification of U.S. immigrant flows to destinations away from the Southwest, West, and Chicago to the Plains, the South, and East Coast as well as into suburban areas. Some states recorded doubling of populations (Singer 2004); certain counties grew at even higher rates. These spectacular changes in local economies and cultures have drawn the attention of scholars. Many of the studies depict the cultural, political, and economic transformations immigrants have wrought in communities that previously had experienced little immigration (e.g., Smith and Furuseth 2006; Schleef and Cavalcanti 2009). Portions of this research, however, are prone to lapse into "a kind of geographic fetishism," emphasizing that the emergent patterns of immigration represent something profoundly new by dint of their spatial distribution alone (De Genova 2007: 1273). De Genova calls for "complex comparisons" across spaces of settlement that views the whole rather than particular spaces and places. A few investigations are system wide. Hempstead (2007), for example, found that between 1995 and 2000, gateway states were not "losing their hold". Scholarship exploring the reasons for this dispersion of immigrants now exists but this literature is quite sparse. Some scholars point to unwelcoming attitudes and poor market conditions in gateway regions, including the hostile context of reception in particular places. Other research highlights the pull of market conditions and nascent enclaves in non-traditional destinations (e.g. Card and Lewis 2007).

Conclusions

Human migration involves the movement of people from one place to another. It is a geographical process. Not only does migration form one of the intellectual pillars of Population Geography, one can use it as a prism through which to view discipline's epistemological shifts. Leveraging Ravenstein's ideas to frame our remarks identified key entry points into the literature on migration in Geography. It also meant that our remarks necessarily favor certain themes over others. For example, we spend no time relating migration theory to the environment. The essay's

structure does have one other advantage, however. Ravenstein mapped and described migration and that type of nomothetic approach set the stage for scholars such as Hägerstrand who helped make migration central to the Quantitative Revolution in the 1950s and 1960s. Migration was also very much part of Behavioral Geography in the 1960s and 1970s, as gravity modeling, migration decision-making, and related perspectives on place utility came to dominate. Migration analysis in Geography is also featured in the more recent Structuralist, Structurationist, Post-structural, and Post-Colonial theoretical trends.

These evolutions reflect the openness of Geography to new theory and lines of inquiry as well as method, and accompany a drift from quantitative to qualitative methodologies. This movement has now gone so far that many current geography graduate students are poorly or even untrained in quantitative methods. Some are even skeptical of their deployment in research on migration and other subjects. (For example, see the collection of articles on the place of quantitative methods in "critical" geography in *The Professional Geographer* 2009 Volume 61, Number 3.) Geography's eclecticism should prompt scholars to read broadly within the discipline and beyond and to appreciate and value rather than dismiss epistemological or methodological difference. Our review is designed in part to remind ourselves of the deep and rich history of migration studies in Geography. Theoretical or methodological narrowness closes down that history, mutes potentially mutually beneficial exchanges among scholars, and impoverishes what Geographers have to offer to the field of migration studies within the discipline and beyond.

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Perspectives on Migration Theory – Economics

3

Michael J. Greenwood

Introduction

The earliest research in migration had no specific theoretical basis. Rather, with limited data the work was descriptive and inferential. Ravenstein's (1885, 1889) famous works provide good examples of such early research. He relied on British census data on place of birth and place of current residence to derive his seven laws of migration that are essentially hypotheses about migration behavior. That early work was descriptive and inferential is not surprising. In his famous *Principles of Economics*, first published in 1890, Alfred Marshall put it this way with respect to economics: "It is the business of economics, as of almost every other science, to collect facts, to arrange and interpret them, and to draw inferences from them. Observation and description, definition and classification are preparatory activities. But what we desire to reach thereby is a knowledge of the interdependence of economic phenomena" (1948, 29). For many years after Ravenstein, migration research was in the "observation and description, definition and classification" phase of the development of migration as a field of research.

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After stressing the importance of collecting facts, Marshall goes on to discuss "scientific analysis": "that is taking to pieces complex facts, and studying the relations of several parts to one another and to cognate facts" (1948, 30). Clearly, for Marshall the facts come first, then the theory, or for him, "scientific analysis." As late as the 1930s, migration theory remained, for the most part, undeveloped. For example, Dorothy Swain Thomas published her well-known survey of the migration literature (*Research Memorandum on Migration Differentials*) in 1938. This work, which in many respects was a tremendous accomplishment, contains no formal theory, but much inference. However, at about the same time that the Thomas work appeared, the beginnings of a migration theory were emerging from the work and data of three British economists. Makower, Marschak, and Robinson published a series of papers in *Oxford Economic Papers* in 1938, 1939, and 1940. Without question, this work provided the gravity model that a short time later would be attributed to Princeton astrophysicist Stewart (1941). Makower, Marschak, and Robinson were concerned with the relationship between local unemployment rates and migration and expressed the (modified) gravity model in the following way (though they of course did not call their relationship the "gravity model"): "Quite a close relationship was found between discrepancies in unemployment rates and migration of labour when allowance was made for the

M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_3

size of the insured population and the distance over which migrants had to travel" (1938, 118).

With his background as an astrophysicist, Stewart was able to see the correspondence between the dispersion of his Princeton students' homes and their location in Princeton and Newton's law of gravitation. Thus, he found an appropriate name to call the relationship. After the development of the gravity model, theoretical constructs would underlie much of the best empirical migration research. The data had to precede formal hypothesis testing, which in itself required theory, whether the theory be based on intuition or formal analysis wherein hypotheses are derived from basic assumptions and relationships.

From the economist's perspective, the theory that underlies migration models involves utility maximization. In other words, an individual or household is presumed to maximize utility, which is a function the quantities of traded and nontraded goods consumed, over some time horizon, as well as amenities, leisure, and residential land. The decision-making unit faces a (full-income) budget constraint. Although the early theoretical work on migration implicitly assumed that potential migrants had full information and certainty about alternative choices (but viewed information as being more costly to obtain at greater distances), later work recognized that risk and uncertainty are involved in migration decision making. Still later work, in connection with what has come to be called "the new economics of migration," considers utility maximization on the part of a broader group, such as a family, extended family, or even a group of members of a community (Taylor and Martin 2001). However, this "new theory" seems more appropriate for less-developed countries where remittance behavior plays a key role in migration decisions, and especially in international migration decisions.

Migration theory developed hand-in-hand with migration data, but with a lag. Early migration data were aggregate and related to life-time migration, or place of birth and current place of residence. Thus, it is not surprising that the first theoretical models reflected aggregate behavior (especially place-to-place migration behavior). Later, as data reporting migration intervals and migrant characteristics became available, the theory underlying migration models became more sophisticated. Moreover, during the 1950s, location theory was finding a place in economics (Isard 1960) and this theory related not just to the location of firms, but also the location of individuals and households, and thus to migration. Formal hypothesis testing requires theoretical underpinnings, and such formal testing necessitates data that meet the needs of such research. The more recent availability of microdata ushered in even more new theoretical developments.

As I discuss and distinguish below, I emphasize the development of the theory that relates to migration, beginning with the gravity model and the modified (or extended) gravity model as well as the human capital model. In this discussion, I distinguish between disequilibrium theories of migration, as opposed to equilibrium theories that are a relatively recent development. I also discuss some developments regarding microdata. Finally, I look briefly at the consequences of migration, but in the context of equilibrium versus disequilibrium theories.

The Disequilibrium Perspective

Until relatively recently, migration was viewed from the disequilibrium perspective. In other words, migration was assumed to occur in response to differentials that were presumed to reflect real utility differences between regions. If migration occurred from low-wage to high-wage regions, wages were thought to reflect differences in economic well-being. Before the wide availability of information on regional wages and income, rural-to-urban migration was presumed to occur in response to the same sort of real utility differences between rural and urban areas. More recently, equilibrium theorists have argued that such wage differentials may not reflect real utility differences because the differences are "compensated." In other words, wages and rents tend to reflect the values of

location-specific amenities such as nice (or not so nice) climate, terrain, and other features of the physical, natural, and man-made environment. Nicer places may provide lower wages and higher rents, whereas, if firm amenities are ignored, less-desirable locations must provide higher wages and lower rents to retain their workers. In this newer approach, the differences are not arbitraged, as they are in the older theory.

In recent years, as immigration to the United State and other industrialized countries has surged, much theoretical and empirical research has concerned international migration. Such migration has been studied almost exclusively in the context of the disequilibrium perspective. This statement is equally true of the large literature on historical international migration. One way to think of international migration in the equilibrium context is to consider various national characteristics as amenities. For example, political systems could be considered as amenities or disamenities that have associated values to which potential migrants react.

In what follows, I first discuss the theories that developed under the disequilibrium perspective. Then I turn to the equilibrium perspective.

The Gravity Model

The earliest theoretical construct that underlies empirical migration modeling is the gravity model. Carey (1858/59) discussed the basic gravity-model relationships at a very early date, and much later Makower et al. (1938) clearly expressed the basic ideas that define the gravity model. However, its original formulation frequently is attributed to Stewart (1941) and Zipf (1946). The gravity model as originally formulated expresses migration from i to j (M_{ij}) as a function of the population of i (P_i), the population of j (P_j), and the inverse of the distance (D_{ij}) between i and j:

$$Mij = \frac{\alpha P_i P_j}{D_{ij}}. \tag{3.1}$$

In Eq. (3.1), α is a constant. Models that embed the gravity variables often have been estimated in double-log form both because the resulting estimated coefficients may be interpreted as elasticities and because this specific functional form (linear in logs) tends to yield good fits. The practice of estimating double-log relationships has existed from the very earliest formulations of the gravity model (e.g., Stewart 1942). Taking logarithms, we see that the model becomes linear in logs:

$$\ln M_{ij} = \ln \alpha + \ln P_i + \ln P_j - \ln D_{ij}. \tag{3.2}$$

In this naive form, the coefficients on P_i and P_j are 1.0 and the coefficient on D_{ij} clearly is −1.0, reflecting a modified form of Newton's law of gravity. However, these coefficients are subject to empirical testing and well may be something other than what is predicted by this naive form of the model. For example, in the earliest test of the model of which I am aware, Makower, Marschak, and Robinson find a distance elasticity of migration, or what they refer to as the "coefficient of spatial friction of" of between (negative) 1.6 and 2.1 % for migration to Oxford during the late 1920s and early 1930s. These authors had place-to-place migration data for Great Britain that included origin and destination counties for the period 1926–1935. The data were from an administrative source, namely, the employment exchange. In his 1942 paper, Stewart anticipates a coefficient of −1.0 and actually estimates coefficients of approximately −1.0 for migration to Princeton, Harvard, Yale, and MIT.

In more general terms, the gravity model may be expressed as:

$$\ln M_{ij} = \beta_0 \ln \alpha + \beta_1 \ln P_i + \beta_2 \ln P_j - \beta_3 \ln D_{ij}. \tag{3.3}$$

The β's are now estimable and may take any number of values, but the coefficients on β_1 and β_2 are expected to be positive whereas that associated with β_3 should be negative. With the recognition that interregional migration is affected by many forces in addition to those expressed in the naive gravity model, this model soon morphed into what I call the "modified gravity model," which some call the "extended gravity model." In more recent years,

a number of variables that are presumed to reflect amenities also may be included – variables such as temperature, population density, and much more. The model now takes the following form:

$$\ln M_{ij} = \beta_0 \ln \alpha + \beta_1 \ln P_i + \beta_2 \ln P_j - \beta_3 \ln D_{ij} + \beta_4 \ln Y_i + \beta_5 \ln Y_j + \sum_{i=1}^{n} \beta_{in} X_{in} + \sum_{j=1}^{n} \beta_{jn} X_{jn}, \tag{3.4}$$

where the X's may be unemployment rates, region-specific amenities (both social and natural), and many other factors expected to influence interregional migration.

Note that if the dependent variable is expressed as an out-migration rate with the at-risk population ($\ln P_i$) of the origin in the denominator, the left side of the equation becomes ($\ln M_{ij} - \ln P_i$). Taking the ($\ln P_i$) term to the right side of the equation yields (($\beta_1 + 1$) $\ln P_i$). Whether the rate is employed as the dependent variable or the absolute measure of migration, the regression results will be identical except that the coefficient on $\ln P_i$ will differ by 1.0 (and of course the R^2 will differ).

The basic variables of the gravity model typically do a very good job of explaining place-to-place migration. However, a major issue from the social scientist's perspective concerns the theoretical underpinnings of the distance, origin population, and destination population variables. What social and economic forces underlie these variables? Distance proxies a number of possible underlying factors:

1. Out-of-pocket costs of moving are related to the distance of the move. Greater expense is involved with more distant moves, and these greater costs reduce the net present values (discussed in more detail below) associated with more distant places, causing potential migrants to select closer alternatives.
2. Opportunity costs rise with distance. Longer moves require more time, which delays job search and employment for those who do not have a job at the destination when they make their move.
3. Information declines with distance. This factor was likely more important in the past, but even in the presence of the internet, more time and expense are involved in more distant moves. For example, the costs of visiting more distant places to participate in interviews tends to be a function of distance.
4. Foregone alternatives rise with distance. This is another form of opportunity cost. Lee (1966) discusses "obstacles" to migration and Stouffer (1940) notes the importance of "intervening opportunities." Wadycki (1975) operationalizes these concepts by defining the alternative maximum (e.g., income) and minimum (e.g., unemployment rate) values within the radius of a given potential move. In other words, he includes in his modified gravity models variables such as the highest alternative income and the lowest alternative unemployment rate within the radius of the move from i to j. When such variables are included in his regressions, the value of the distance elasticity of migration falls markedly.
5. Psychic costs rise with distance. Such costs may involve separation from relatives and friends, as well as from familiar surroundings. These costs may be offset by visits to the origin locality, but visiting from more distant places involves greater costs.
6. Current migrants have a strong tendency to follow their relatives and friends, and thus past migrants. If past migration tended to be to nearby places, then one effect reflected in the distance variable is this "family and friends" effect. When Greenwood (1969) accounts for past migration by means of a migrant-stock variable, the distance elasticity of migration falls significantly.

Larger origin populations include more persons who have any given reason to migrate. Thus out-migration should be greater from places with larger populations that are at risk to migrate. With respect to destinations, larger populations offer more job opportunities and a greater variety of employment opportunities, and for these reasons ought to attract more migrants.

Moreover, more populous regions ought to have attracted more past migrants from any given origin. With the family and friends effect operating, more migrants ought to move to such places. Again, when past migration is taken into account, the coefficient on the destination population variable falls appreciably.

Present Discounted Values

The next theoretical advancement was to place the income (or perhaps wage) terms in Eq. (3.4) in an investment context. Following Schultz (1961) and Becker (1962), Sjaastad (1962) viewed migration as a form of investment in human capital similar to education and employment experience. Investments are forward-looking in the sense that their payoffs accrue in the future. The same is true of migration because a differential stream of future returns is anticipated. Because these returns accrue in the future, they must be appropriately discounted. Now present values come into play. The net present discounted return from a move from region i to region j is given by

$$\mathrm{NPV}_{ij} = \sum_{t=1}^{m} \frac{(Y_j - Y_i)}{(1+r)^m} - \sum_{t=1}^{m} \frac{(C_j - C_i)}{(1+r)^m} \qquad (3.5)$$

where r is the discount rate, t is the year that migration occurs, and m is the year of retirement. For the sake of convenience, m also is in the cost term, but additional years may be included if the costs continue after retirement. Differential costs (C_i, C_j) also are involved in the present-value calculation. Such costs may consist of the direct expenses associated with the move, as well as additional, continuing expenses associated with maintaining contact with relatives and friends in the origin. The basic idea is that a potential migrant calculates the net present value of a move to all possible destinations, ranking the destinations from highest to lowest. Because Y_i is in the calculation, the individual is comparing each destination to his current place of residence. If no alternative yields a positive value, he stays; however, if some do yield positive values, he selects the alternative that produces the highest value. One of the earliest efforts to empirically estimate such present values was provided by Wertheimer (1970), but no estimate of costs was included in his present-value calculations.

The present values discussed above are not known with certainty. Since they involve future returns and costs, they are expected net present values. Thus, risk and uncertainty play a role in the decision to migrate. Todaro (1969) develops a model based on the expected nature of the costs and returns involved in migration. Although he developed his model with application to rural-to-urban migration in less-developed countries where urban surplus labor is common, the ideas that underlie the model are applicable more generally. He looks not only at the income differential between the destination (urban area) and the origin (rural area), but also at the probability of the migrant finding a job in the destination. He ties this probability to the destination unemployment rate, where the probability of employment is inversely related to this rate. Now the expected income gain is weighted by the probability of being employed in the destination. Although there are other ways to include risk and uncertainty in migration models, the Todaro approach is simple, straightforward, and intuitively appealing.

Equation (3.5) provides two additional implications that are relevant to migration. The first concerns the time horizon (m) over which migration is expected in the destination, and the second concerns the discount rate itself (r). The time horizon is important because returns and costs are sensitive to the number of periods over which the individual is expected to earn these returns and experience the costs. Thus, if it is profitable to migrate, it is prudent to move now because to postpone moving eliminates the returns that are discounted least. Consequently, migration tends to occur at younger ages. Moreover, at older ages, the number of expected years before retirement is limited and the back end of the expected earnings stream is truncated. Older persons thus tend to stay put until retirement, when a slight blip occurs in migration propensities. The discount rate (r) itself may be critical in the decision to migrate because higher

rates dampen the discounted returns to migration, thus reducing the probability of finding alternative areas with positive net present values. Different individuals have different rates, and these different rates may vary systematically across various types of individuals. Risk aversion likely underlies the discount rate embraced by an individual or a group. Those with shorter expected life-spans would tend to not migrate. This group could include people who live in dangerous areas, such as inner cities, and those with serious health problems. It also could include older persons, providing an additional reason for them to stay rather than move.

Job-Search Models

Job-search models are an outgrowth of the human capital approach. These models place the individual in a situation in which he considers the benefits and costs of migrating to any number of alternative locations, but he must search to find exactly what his options are. Now net present values (NPVs) are placed in a search context. The individual presumably searches over many alternatives, receiving a distribution of job offers (or NPV_{ij}s) from each. Some offers may yield NPV_{ij}s that are positive, whereas others may be negative. However, the individual need not accept any positive offer if his reservation NPV is higher than any NPV he observes. The longer he searches for an acceptable alternative and fails to find one, the more likely is his reservation NPV to fall. Longer searches entail higher costs. Not only may the potential migrant's reservation NPV be dependent upon the length of his search, it also may be dependent upon all sorts of personal characteristics such as age, marital status, and the presence of children (Greenwood 1985).

Microdata Approaches

One of the major issues with modified gravity models is that they include only place characteristics and other factors that link origins and possible destinations, like distance and prior migration between the regions. They almost completely fail to account for personal and household characteristics that are critical in migration decisions. General area characteristics have been used to proxy personal characteristics, but such proxies leave much to be desired. The inclusion of personal characteristics in migration models required micro data. With the availability of such data, many avenues opened for further development of migration theory. Now specific characteristics like age and education could be taken into account, and the selective nature of the migration decision (and the remigration decision) could be better studied and understood. The availability micro data also allows the investigator to organize aggregate data in specific ways, such as by age and/or education or by native born versus foreign born. In this way, additional light is cast on the role of personal characteristics in migration decisions. Individual decision making underlies the aggregate models, but now theoretical models involving individual decisions could be used in conjunction with individual data.

As noted in Greenwood (2010), a potentially important refinement that has been lacking in micro-based studies of migration is to place the individual in the distribution from which he is being drawn. For example, in studies that try to determine the effects of state and local taxes on migration, average taxes often are used as an area characteristic. With the availability of micro data, an individual can be placed in the distribution so that the estimated tax becomes an individual characteristic. Now, given the individual's income, number of exemptions, age, and other characteristics, a fairly precise estimate of his tax liability can be made for any area of residence and potential area of residence. Much the same type of approach could be followed in studies of welfare's influence on location choice.

Over the last 40 years, as new micro data sets have become available, discrete-choice models of migration have become common. Some of the early models did not employ area characteristics at all, but rather include only personal characteristics (e.g., Linneman and Graves 1983). Later work included both classes of characteristics (e.g., Herzog and Schlottmann

1986). Whether the models were based on aggregate data or microdata, one of the major issues was that they did not specifically account for alternative opportunities. Given the NPV context in which this work was implicitly placed, this failure was potentially serious. Ideally, alternative opportunities at various destinations should be taken into account in the model. Moreover, the early models that took into account alternative destinations did not take into account a key choice for the potential migrant – staying in the current location (e.g., Blank 1988).

One method of accounting both for alternative destinations and remaining at the present location is the conditional logit model (Davies, Greenwood, and Li 2001). This model has a firm microeconomic foundation based on individual utility maximization and is derived from the random-utility model. Consider an individual (potential migrant) living in area i who has J possible destinations from which to choose, including his present location. If he were to actually choose area j, his resulting utility would be

$$U_{ij} = \beta' X_{ij} + \varepsilon_{ij}, \tag{3.6}$$

where X_{ij} is a vector of attributes specific to the ij combination. In the conditional logit, β is constant across possible destinations. If the individual were to select destination j, utility U_{ij} is presumed be the highest among all J choices: $U_{ij} > U_{ik}$ for all $k \neq j$. For destination j, the statistical model for the probability of migrating from area i to area j is

$$P(y_i = j) = P\left(U_{ij} > U_{ik}\right) \text{ for all } k \neq j, \tag{3.7}$$

where y_i is a latent variable representing the indirect utility of the ith alternative. Individuals who choose to not move choose to remain in area i, and this distinction allows the estimation of unobserved differences between moving and staying. An alternative way of viewing the decision to migrate is to focus only on the migrants by removing the current location from the choice set. However, such a specification results in a selectivity problem because the stayers may have migrated under certain conditions and this possibility is eliminated. The conditional logit depends on the fairly strong assumption of independence of irrelevant alternatives (IIA). In other words, the relative probabilities between the choices must be independent of other alternatives. Tests are available for the IIA assumption.

Selectivity Issues

Selectivity in migration has been recognized from the earliest times. Ravenstein (1885) certainly recognized that migrants were different than the average resident of the United Kingdom. Moreover, Thomas's (1938) reference to "migration differentials" was clearly a reference to the selective nature of migration. She stressed age selectivity, but did not ignore educational selectivity and numerous other forms of selectivity. In the presence of microdata the issue of selectivity becomes major. Now it is possible for individuals to self-select themselves out of a population of interest. For example, if the investigator were studying the effects of migration by comparing the migrants observed at the end of a period with the on-going residents of the area, the possibility exists that the least successful migrants had returned to their origin or moved on to a third alternative location, but in any case have escaped observation in this location. Once identification conditions are met, econometric procedures now allow account to be taken of such selectivity problems (Heckman 1976).

The Equilibrium Perspective

In discussing the equilibrium perspective on migration, I follow Greenwood (1997) and begin by specifying an indirect utility function and a unit-cost function.

Indirect utility function:

$$v = f(w, r; a, \phi); \tag{3.8}$$

Unit-cost function:

$$c = g(w, r; a, \theta), \tag{3.9}$$

where

w = regional wage level,
r = regional rent level,
ϕ, θ = shifters for exogenous disturbances.

The disequilibrium approach does not rely on amenities (a), and w and r adjust slowly to exogenous disturbances. In the equilibrium approach (1) migration is conditional on amenities; (2) the approach does not rely on long adjustments of w and r to disturbances (i.e., assumes that institutional and other impediments to factor mobility are low); and (3) systematic long-term forces drive migration – forces such as rising real income in some or all locations, because these forces underlie consumption amenity demand growth. Each approach assumes that spatial variations in utility underlie migration decisions, but the differences arise from the source and persistence of these variations.

Taking the equilibrium approach, we model household location decisions in the following way:

$$U = U(X_{tr}, X_{ntr}, a, h, s), \tag{3.10}$$

where

X_{tr} = traded goods (presumably available at all locations at a nationally-determined price),
X_{ntr} = nontraded goods (presumably having regionally-varying prices that depend on regional wage (w) and regional rent (r) levels),
a = amenities that vary in nature, but are unproduced (e.g., climate),
h = leisure, and
s = residential land.
The full-income constraint is

$$w(a)T + I_0 = P_{tr}X_{tr} + P_{ntr}(a)X_{ntr} + w(a)h + r(a)s \tag{3.11}$$

where

T = total time available during the period,
I_0 = nonlabor income (assumed zero for simplication),
P_{tr} = price of traded goods, and
P_{ntr} = price of nontraded goods.

We now maximize utility subject to the full-income constraint.

Based on the assumptions of the equilibrium approach, migration causes utility to be spatially invariant. Any location offering extra-normal utility for whatever reason will experience in-migration until, in some combination, wages fall or rents rise sufficiently to eliminate the utility differential.

Now consider the following production function:

$$X_i = X_i(N, L, X_{ntr}, X_{tr}; a), \tag{3.12}$$

where

X_i = output,
N = labor, and
L = land.

If we assume a linear homogeneous production function, the unit-cost function is

$$C_i = C_i(w, r, P_{ntr}, P_{tr}; a). \tag{3.13}$$

P_{ntr} and P_{tr} in equilibrium will equal their respective unit costs of production, and will therefore be functions of w, r, and a. If we take the price of X_{tr} as the numeraire and solve for P_{ntr} in terms of w, r, and a, we simplify the unit cost function to:

$$C_i = C_i(w, r, a). \tag{3.14}$$

In equilibrium, profits must be the same in all locations. Equilibrium theorists argue (1) that even in simple cases, neither producer nor consumer amenities can be valued solely in either land or labor markets; (2) both exclusively producer and exclusively consumer amenities will be undervalued by studies that assume capitalization in only one market; and (3) they deny the validity of migration studies that account for

wages or income, but fail to account for rents and location-specific amenities.

Three empirical questions arise with respect to the equilibrium approach:

1. Does interregional equilibrium, or something close to it, prevail? If the system is typically far from equilibrium, the basic assumption underlying the equilibrium approach would be invalid, and empirical models based on the approach would presumably fail.
2. When the system is shocked, how rapidly does it reestablish equilibrium wages and rents? If the system is slow to adjust, the disequilibrium framework assumes more appeal.
3. In migration decisions, how important are location-specific amenities compared to traditional disequilibrium-type variables like relative wages?

In empirical studies, location-specific amenities appear to play an important role, but often not the decisive role (Greenwood and Hunt 1989). Job opportunities seem to be more critical. However, hypotheses that related to the long run are a different matter. Studies that adopt the equilibrium approach have had a difficult time providing empirical evidence that supports the various long-run hypotheses. Mueser and Graves (1995, 190) express this position: "Higher winter temperatures and low summer temperatures are associated with higher levels of migration. Interestingly, there is no evidence that the effect is growing stronger over time." Thus, some very basic hypotheses related to the equilibrium approach require validation that has to date not been forthcoming.

Consequences of Migration and Conclusions

The consequences of migration may be viewed from either or both of two perspectives. These are the individual and the regional. First, individual migrants realize certain returns from their action. These returns may be viewed from the point of view of how the migrant would have done in the origin if he had not moved and how he actually did in the destination relative to otherwise comparable on-going residents of the destination. The former case relates to individual returns to migration, whereas the latter relates to assimilation in the destination. The availability of microdata has greatly enhanced our ability to assess each type of consequence, and much work has been done on these issues in recent years, especially the assimilation issue. However, whereas much relatively recent research has focused on the assimilation of international migrants in their new country of residence, little comparable research has been conducted on the assimilation of internal migrants in spite of the obvious importance of this issue.

Less research has been conducted on the regional consequences of migration. These expected consequences differ considerably for the equilibrium versus the disequilibrium perspectives. In the disequilibrium approach, regional differences in wages and rents are presumably arbitrageable. In other words, because regional differences in wages, for example, are presumed to reflect real utility differences, migration is expected to narrow the differences. Labor moves from the low-wage region to the high-wage region and labor-supply shifts cause wages to move toward equilibrium. Even in the absence of migration, capital is expected to grow faster in the low-wage region because the rate of return to capital is higher there and to grow more slowly in the high-wage region because the rate of return is lower there. Thus, wages tend toward equilibrium due to shifting labor demands that favor the low-wage region.

In the equilibrium approach, wage and rent differences do not reflect opportunities for utility gains. Differences in wages and rents are presumed to be compensating and therefore they do not drive migration, and whatever migration occurs does not arbitrage the differences. Rather, rising real incomes in all locations change the demand for location-specific amenities, and migration occurs to amenity-rich areas. Thus, implications for the consequences of migration differ significantly for the two perspectives (Mueser and Graves 1995).

With respect to all types of migration, but especially internal migration, we do not have a fundamental understanding of the composition of

migration flows. Much descriptive research has been conducted on migrant characteristics, such as age, sex, and skill. However, little attention has been directed to the composition of these flows. Why do various flows consist of *relatively* more men (women) than women (men), young than old, skilled than unskilled, more educated than less educated? How and why does composition vary over the business cycle and over longer periods of time? Some evidence exists concerning these issue in the international migration context, but probably due to data limitations we know almost nothing in the context of internal migration.

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Perspectives on Migration Theory—Anthropology

4

Caroline B. Brettell

In 1987, in an edited volume titled *Migrants, Workers, and the Social Order*, Jeremy Eades (1987) addressed some of the major themes of the "new anthropology of migration." Among these were: the political economy of migration: the social relations of migration, including a focus on chain migration, social networks, and links to home; and the relationship between migration and ideology, including gender ideology, and questions of ethnicity. Eades concluded by suggesting that by the late 1980s the anthropology of migration had become "the anthropology of a world social order within which people struggle to make lives for themselves, sometimes helped, but much more often hindered, by the results of international flows of capital and the activities of states over which they have no control" (p. 13).

Since Eades's assessment, several other anthropologists have reviewed the literature on the anthropology of migration, tracing its thematic and theoretical developments from its beginnings in the study of rural-urban (i.e. internal) migration in the developing world to the examination of international migration streams (Foner 2000, 2003; Sanjek 2003; Silverstein 2005; Trager 2005a; Brettell 2008a; Vertovec 2010; Fassin 2011; see also Kearney 1986). Rather than to revisit already well-trodden ground, this essay focuses selectively on several new directions—empirical, methodological, and theoretical—that have captured the attention of anthropologists during the last decade of the twentieth century and the first decade of the twenty-first century. The essay emphasizes key concepts and debates as well as areas where anthropological interventions are perhaps distinctive. Whenever possible it situates anthropological approaches to migration in relation to theoretical and methodological trends in the discipline as a whole—among these the interest in exploring the relationship between micro and macro level processes as well as the role of the state in everyday lives; the shift from a bounded and fixed understanding of culture and communities to one that assumes fluidity and unboundedness; and the move away from structure and toward agency, or to the interaction between structure and agency as part of a practice theory approach to social life (Bourdieu 1977; Ortner 1984, 1996). Since theoretical approaches and research methodologies are integral to one another, the essay begins with a discussion of methodology and units of analysis. It then turns to an examination of the impact of the transnational framework, to anthropological formulations of citizenship and belonging, to the literature that explores the reception of

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_4

immigrants and the representation of emigrants in their homelands, and finally to anthropological perspectives on the relationship between the law and immigration.

In this essay, primary attention is given to anthropological research on population movements that cross national boundaries, but where appropriate this essay, like others in this section, also takes note of research on internal population movements, particularly those in the developing world. Lillian Trager (2005a: 5) has observed that there are separate literatures on international and internal migration, rooted in the assumption "that there are different explanations, and presumably different theoretical issues" at stake. However, like Brown and Bean in this volume, Trager suggests that all types of migration should be considered together in order to identify similarities and differences in forms of mobility. In the conclusion to this essay, the comparison between approaches to internal and international migrations is briefly addressed. A few additional areas of theoretical interest in the anthropology of migration as well as some directions for future research are also identified.

Research Methodologies and Units of Analysis

Anthropology has its roots in local community studies of cultures that were assumed to be fixed and timeless, structured and bounded. These communities and the populations that lived within them were both the object of study and the unit of analysis. This approach left little room for research on social and cultural change or for examination of the relationships between the local and the global. Migration is, of course, both a local and a global process. Whether within or across national borders, migration involves individuals and households, movers and stayers, places of origin and places of destination, and social networks that traverse geographical space. Its complexity has led anthropologists to explore varying units of analysis as well as diverse methodologies in their studies of migration.

Narratives and life histories are deeply rooted in anthropological methodology (Langness and Frank 1985) and have been used to great effect to capture how people live and experience the displacement and emplacement associated with being a migrant or a refugee (Gmelch 1992; Myerhoff 1992; Brettell 1995, 2003b; Hart 1997; Chamberlain 1997; Hirsch 2003a; Constable 2007; Gardner 2010; Brettell and Reed-Danahay 2012). As Esmond (2007: 253) argues in relation to her presentation of refugee stories, "the narratives of socially positioned actors can promote a greater appreciation of the diversity of experience involved in forced migration, against universalizing and stereotypical descriptions of what it means to be a refugee." The use of narratives in anthropological studies of migration varies and draws attention to the broader theoretical interest in the discipline regarding the relationship between structure and agency (Brettell 2002). The life course migration narratives recorded by Gardner (2002a, b) not only capture the experiences of elderly migrants but also show how ideas about selfhood and identity shift over time. Brettell and Alstatt (2007) use the narratives of immigrant entrepreneurs to illustrate how decisions to become self-employed are rooted in individual biographies (something they refer to as "biographical embeddedness") and hence reflect the agency of the migrant in the context of structural factors that have been used most commonly to explain high rates of small business owners within new immigrant populations. Sanchez Gibau (2005) presents the identity narratives of Cape Verdians in Boston to demonstrate how they create a space for themselves within established racial and ethnic hierarchies. Building from the life stories of four children who were left behind in the Caribbean while their parents migrated abroad, Olwig (1999: 281) argues that macro-theoretical approaches cannot capture "what it is like to actually construct one's life within the framework of . . .a 'globalised', 'deterritorialised' or 'transnationalised' society." By contrast, life stories provide, she writes, "insights into the notions of home and identity that are held by some of the people who have been most affected by the physical movements and global-local

relations which have been described as important features of the modern world". And in a study of the migration of rural Chinese women to cities, Yan Hairong (2003) uses narrative to capture the experiences of young women who view the rural countryside as a "field of death" and move to the city in pursuit of a "modern subjectivity" (p. 579).

While the narrative approach tends to emphasize the individual as the unit of analysis, albeit an individual viewed as embedded in historical, social, political, and economic contexts, other anthropologists have directed their attention to the household. As Grasmuck and Pessar (1991: 15) argued some time ago, "it is not individuals but households that mobilize resources and support, receive and allocate remittances, and make decisions about members' production, consumption and distribution of activities". The household approach, part of a "new economics of migration" that is characteristic of several disciplines (Massey et al. 1993), assumes that minimizing risk is as important as maximizing income. Households diversify their risk by sending some members of the family out into urban or foreign labor markets while keeping others at home (Holmes 1989; Goldín 2001). Further, households may send workers out as migrants "not only to improve income in absolute terms but also to increase income *relative* to other households, and, hence to reduce their r*elative* deprivation compared with some reference group" (Massey et al. 1993: 438). Hua Qin (2010), in a comparison of labor and non-labor migration households in one municipality in southwestern China, documents significant differences in agricultural productivity, the use of agricultural technology, income and consumption patterns. The migrations under consideration here are both internal and international. In his study of regional, national and international migration patterns in southern Mexico, Cohen (2004: 144) has focused on "how migrants act as members of households and communities and how these households and communities make sense and order of migration outcomes."

Cole and Booth (2007), in their research on immigrants in Sicily, have chosen to emphasize neither individuals nor households as the primary unit of analysis, but instead particular sectors of the labor market—domestic service, agriculture, prostitution—where immigrant workers are found. These sectors, the dead end "underbelly of the global economy" reveal, they suggest, "the salience of network and ethnic and racial stereotypes and makes plain the nature of interactions between immigrants and employers. . .This perspective directs attention to the profound consequences of immigrant labor for the native born and to their dependency on others from afar" (p. 6). Cole and Booth also argue that the immigrant story is also Sicily's story of changing positionality in the context of globalization. Adding intricacy to the world systems approach (Wallerstein 1974), these authors describe a process by which the "high personal costs in one part of the world underwrite prodigious consumption in another. The costs are often borne by transnational households, families whose members remain linked by exchanges of information, emotional support, and money even as they remain separated by thousands of miles. . .. This involves a transfer of resources from poorer to richer areas because the costs of raising, training, and caring for workers is unevenly distributed" (Cole and Booth 2007: 142). Other anthropologists have also explored particular labor market sectors, sometimes framing their approach in relation to feminist theory. Examples include Constable's (1997, 2007) research on Filipino domestics in Hong Kong; Nagy's (1998) study of how global and local inequalities are reflected in the asymmetrical relations of household labor in Qatar; Brennan's (2001) work on the interactions between German tourists and Dominican women who migrate to the city for sex work; and Zheng's (2003) study of bar hostesses of rural origins in the city of Dalian, China who contest their image as country bumpkins through patterns of consumption. While anthropology therefore shares with economics (see Greenwood essay in this section) an interest in labor markets, the approach in each discipline is distinct. Economists focus on the causes of migration and the utility maximization of unequal wage and labor markets; anthropologists focus on the experience of different forms of labor within the broader migratory labor market.

Reflecting long-standing interests within anthropology in sites of conflict and in cultural performances, some anthropologists have adopted a more interpretive approach, "reading" particular events and controversies for what they tell us about dimensions of immigrant identity and the migrant experience (Fassin 2005; Bowen 2004). For example, Leo Chavez (2008) frames a discussion of the immigrant marches of 2006 in the United States and the Minuteman Project as cultural "spectacles" that illustrate processes of inclusion and exclusion while Deborah Reed-Danahay (2008) illuminates Vietnamese American constructions of belonging in her analysis of a controversy over the display of the flag of the Socialist Republic of Vietnam (rather than the south Vietnamese flag) at an International Week on a university campus. Ralph Grillo (2007) traces a social drama that erupted between a local Sikh community in Birmingham, UK and a repertory theater company that was staging a play that the Sikhs found offensive. A violent demonstration resulted in suspension of the production which in turn led to an international outcry regarding the infringement of artistic license. Elsewhere Grillo (2005) brings the same approach to a detailed discursive analysis of a local protest in a suburb of Brighton in southern England to halt the establishment in their local community of an induction center for asylum seekers at a local hotel. He reads this protest for what it tells us about British middle class xenophobia and denials of racism. In a similar vein and with similar methods of discourse analysis, Brettell and Nibbs (2011) focus on the Dallas-area suburban community of Farmers Branch, a local place that passed legislation against unauthorized immigrants. They analyze these local actions for what they reveal about the sense of threat, among white suburbanites, to both their middle class status and their identity as Americans living in a country governed by "rule of law". The work using discourse and event analysis is more characteristic of research on international migration, perhaps because the politics of identity and difference are more salient and hence conflicts and confrontations more common.

An additional innovative approach in the anthropology of migration involves operationalizing the city as the primary unit of analysis (Sanjek 1998; Foner 2000; Stepick et al. 2003). The city as context model was first formulated in the 1970s in conjunction with the development of urban anthropology and as part of an effort to distinguish between anthropology in cities and an anthropology of cities (Rollwagen 1975). It was revisited by Foner (1987) in relation to her research on New York City, past and present, as a city of immigrants, and by Lamphere (1992) as a framework for comparisons across a range of cities as well as for linking macro and micro processes. Brettell (2003a) added to these efforts to "bring the city back in" by laying out a set of parameters of urban variation that might guide the comparative study of the relationship between cities and immigrants. More recently, Foner (2010: 58) has suggested that using the city as the unit of analysis furthers understanding of "how constructions of race and ethnicity and intergroup relations develop in particular urban centers in the United States in the context of large scale immigration." Clearly the same could be said for other cities around the world whether they are impacted by massive internal population movement or by international immigration (Hanley et al. 2008).

Building on but also moving beyond the 'city as context' approach, Glick Schiller et al. (2006) have called on scholars to pay more attention to the role of city scale as it influences processes of migrant incorporation and transnational connection. These authors, inspired by the work of geographers, view this approach as an alternative to the methodological nationalism reflected in studies that emphasize ethnic groups and ethnic institutions. These ideas of cities and city scale as important units and dimensions of analysis and comparison are further developed in a pathbreaking edited volume *Locating Migration: Rescaling Cities and Migrants* (Glick Schiller and Caglar 2011; see also Caglar 2010) which includes several case studies of cities in the early twenty-first century. Instead of viewing cities as "containers, providing spaces in which migrants settle and make a living", the editors and authors

in this book choose to explore how migrants "actively contribute to the restructuring and repositioning of either their cities of settlement or those to which they are transnationally connected" (p. 2). This volume promotes an approach that views migrants as "agents and subjects of the global processes that reposition. . .localities" (p. 3) and the neoliberal restructuring and repositioning of cities as a diverse process that impacts the relationships among migrants, cities, and transnational social fields. Illustrative of this argument is the essay in the book by Salih and Riccio (2011) that compares how the Italian cities of Ravenna and Rimini have received immigrants—the first openly, the second with hostility. Salih and Riccio attribute this difference to distinct trajectories of economic development and hence processes of rescaling. Similarly, in his essay in the book, Van Dijk (2011) links the different pathways of economic, political and religious incorporation of Ghanaian migrants in the commercial city of Amsterdam and bureaucratic city of The Hague to different job markets, levels of surveillance, housing conditions, and organizational opportunities in these two cities. Ultimately, the approach put forward in *Locating Migration* provides a theoretical and conceptual framework for understanding how the global and the local intersect and interact and the role and experiences of migrants in these processes.

Clearly research that highlights cities as units of analysis is framed by a comparative perspective that has long been characteristic of the anthropological enterprise, although not without controversy and debate (Brettell 2009). Glick Schiller and Caglar (2011: 19) are calling for "a theory-inspired comparative agenda that will advance conceptual and empirical knowledge on urban and migrant dynamics". For many anthropologists, this comparative agenda is a fundamental dimension of their work. Foner (2005), for example, explores comparisons across time but also across trans-Atlantic space and urban and national space. Such comparisons, she argues, "not only underscore what is distinctive about immigration flows to Europe and the United States and the national and urban contexts into which the immigrants have moved but also how European and American cities have changed as sites for receiving and incorporating immigrants over time" (p. 223). Foner and Alba (2008) use this comparative approach to great effect to point out similarities and differences in the role of religion in processes of immigrant settlement and incorporation in the United States and Europe. They observe that in the United States religion has often been theorized as a bridge to inclusion while in Europe it marks a fundamental social divide. Foner and Alba describe a Europe characterized by "cultural racism" and a United States "plagued by deeply rooted biological racism, which stigmatizes and disadvantages recent immigrants, who are overwhelmingly Asian, Latino, and Black and thus outside the pale of whiteness" (p. 384). The comparisons that Foner and Alba draw lay the ground for more subtle theory building regarding the ways in which immigrants are either included or excluded. Their approach also reflects the keen interest within the anthropology of migration in multi-sited methodologies.

Since the late 1970s, both in advance of and in association with the florescence of the multi-sited ethnography (Marcus 1995), anthropologists studying both internal and international migration have conducted research in both sending and receiving areas. They were interested in discovering the articulation between places of origin and places of destination. In recent years, this approach has yielded a number of excellent studies of the impact of outmigration on sending regions or communities and on those left behind. One direction of research explores how a so-called "culture of migration" emerges within sending areas—a situation where "migration becomes deeply ingrained into the repertoire of people's behaviors, and values associated with migration become part of the community's values" (Massey et al. 1993: 452–453). Such a culture of migration has a long history in northern Portugal (Brettell 1986, 2003a, b), in the islands of the Caribbean (Olwig 1999), and it is manifest in twentieth and twenty-first century Mexico. Cohen (2004) adopts this cultural model in his analysis of the migration

experiences of rural Oaxacans in southern Mexico. He operationalizes the 'culture of migration" to mean "that migration is pervasive—it occurs throughout the region and has a historical presence that dates to the first half of the twentieth century [and that] the decision to migrate is one that people make as part of their everyday experiences. Third and finally," he continues, "the decision to migrate is accepted by most Oaxacans as one path toward economic well-being" (p. 5). Through this approach Cohen is able to link local circuits of migration between rural areas and local provincial towns or the state capital, national circuits to Mexico City or agricultural fields in Baja California, and transnational moves to the United States. Cohen stresses that using the term cultural to describe the migration process is not to suggest that it is hard-wired. Instead, he describes migration as "one response among many to patterns and processes that link households and rural communities to global labor markets, flows of goods, and personal demands" (p. 5). Looking at this culture of migration, he argues helps us to better understand the impact of migration on non-migrants as well as on the communities they leave (see Cohen and Sirkeci 2011). One might also suggest that understanding this culture of migration might better equip policy makers interested in immigration reform in the United States to develop approaches that deal with the sending end of the continuum.

Malkin (2004) adds the dimension of gender, a topic that has drawn consistent interest and theoretical attention among anthropologists of migration (as it has for geographers of migration; see Chap. 1 by Wright and Ellis in this volume) for some time (Mahler and Pessar 2001, 2006; Mahler 2003; Pessar 2003; Brettell 2008a), to her analysis of the Mexican culture of migration. Despite an increasing number of female migrants, Mexican men and women continue to define migration flows "as primarily male" (p. 77). El Norte is the place of work and Mexico is the place of family and of life; hence migration itself is closely related to ideas of masculinity. However, in the immigrant context, where men are forced to engaged in several practices associated with femininity (being tied to the house, perceiving the street as a threat, constant negotiation for respect, lack of social position, domestic chores), their construction of masculinity is constantly contested.

Drawing on concepts and theoretical perspectives in a broader anthropology of gender, other anthropologists have explored how migration, both internal and international, impacts and alters gender roles and relationships in the sending community (Grimes 1998; Mills 1999; Trager 2005b). For example, Pauli (2008) describes a traumatic relationship between Mexican wives and their mothers-in-law with whom they live when their husbands depart for the United States. These Mexican wives use the remittances sent by husbands to construct a home of their own so that they can achieve some independence. Pauli suggests that the changes associated with these new patterns of residence are likely to erode the status and security of the elderly population living in these sending villages. In her multi-sited ethnography, Hirsch (2003a) describes an emerging trend toward companionate marriages in both a sending community in Jalisco, Mexico, and among Mexican immigrants in Atlanta. She outlines a shift from *respeto* (respect) to *confianza* (trust). Although there are a number of reasons for this change, the integration of sending communities into migrant circuits has had particularly important implications for courtship and marriage (p. 84).

In both a similar and different vein, Gamburd (2008) explores the impact of the transnational migration of Sri Lankan housemaids who journey to the Middle East on 2-year labor contracts on the husbands and children who are left behind. Their absence disrupts widely accepted gender and parenting roles, with fathers and extended female kin taking over the management of the household. Gamburd suggests that there is concern among villagers, local politicians, and the national media about the long-term effects of maternal absence on children in particular. Her research indicates that while children do not experience abuse and neglect they do receive reduced education and paternal alcohol consumption has increased. According to Gamburd (2000), these women breadwinners, when they

return from abroad with their experiences of cosmopolitanism, challenge the gender hierarchies in the homeland. They face backlash and are subjected to accusations of prostitution and marital infidelity while abroad. As a result they resist trying to change local hierarchies once they return in order to subvert these accusations and the sometimes violent behavior that accompanies them.

Gamburd's work fits in to a larger literature on transnational motherhood, the "circuits of affection, caring, and financial support that transcend national borders" (Hondagneu-Sotelo and Avila 1997: 550; see also Moon 2003; Foner 2008; Fresnoza-Flot 2009). For example, Latina domestic workers who leave their children behind in order to take up positions as live-in nannies in the United States, alter the meanings of motherhood in order to accommodate the spatial and temporal separations from their children. These domestic workers distinguish their understanding of motherhood from things like child abandonment or estrangement and, according to Hondagneu-Sotelo and Avila (1997), convince themselves that physical absence is not emotional absence and that their children are better off at home than they are with them. Further, they redefine motherhood to include the breadwinning role, redefining their caregiving responsibilities to include the money they earn in the United States. Finally, to satisfy their own emotional needs, they transfer the nurturing aspects of mothering to the children of their employees. In her work on Filipino domestics who work in Italy, Parreñas (2001: 381) describes a form of "commodified love" based on purchasing things for children left in the sending country. She writes that despite the more egalitarian gender structure in the Philippines (bilateral kinship, women with comparable levels of education to men and a high rate of participation in the labor force), "transnational households are considered 'broken' because the maintenance of this household diverges from traditional expectations of cohabitation in the family; they do not meet the traditional division of labor in the family, and they swerve from traditional practices of socialization in the family" (p. 383). Finally, based on research in Ghana, Coe (2011: 149) explores "how living apart—parents from children and spouses from one another—looks and feels different, if at all, for the families of internal migrants as compared with those of international migrants." She then rephrases this question to argue more broadly for a more nuanced understanding of proximity and distance in the lives of migrant families.

It is not only traditional gender relations and identities that are impacted as a consequence of migration and revealed through multi-sited ethnography and a theoretical approach that frames the local in relation to the national and the global. So too are other dimensions of social organization, social hierarchy, and ritual behavior. Gardner (1995) offers a detailed analysis of these impacts on a sending community, Talukpur, in Bangladesh that has experienced outmigration to various destinations throughout the twentieth century, but most recently to the Middle East. Families of migrants have experienced an improved standard of living and increased access to health care, education and other forms of conspicuous consumption. All these changes have widened social and economic differentiation as well as challenged traditional hereditary status, shifted marriage patterns, and even impacted forms of religious practice and belief. Gardner (1995: 270) writes: "Successful migrants no longer need to believe in miracles, for they now have their own sources of power and transformation. In contrast, the most vulnerable in Talukpur, landless men and women who lack the social capital of belonging to high status *gusthi* [(patrilineages)], stress not only the role of fate in shaping their lives, but also the continued possibility of complete change." In an intriguing approach that argues that those who stay behind are both displaced and emplaced by processes of migration, Chu (2006) analyzes the impact on a local Chinese sending community in Fuzhouan Province of the building of new roads and "American Guest" houses. "To be the ideal kind of modern, cosmopolitan subject in Longyan," Chu writes, "one needed to find ways to be always better connected and more fluidly on the move, even as one remained in the same 'home'

site" (p. 420). Grigolini (2005) also discusses the importance of the houses that "provide more than shelter" that are built in sending communities with the remittances of Mexican emigrants. These houses are symbols of success and ideals "to be emulated by all migrants seeing social recognition" (p. 214). Finally, based on his research in Nigeria, Smith (2004) describes the desire of Igbo rural-urban migrants to be buried at home, pointing to this practice as an indication not only of the strength of ties to place of origin but also of the dynamics of social change. "Funerals in Igbo-speaking southeastern Nigeria are marked not only by obligations to come 'home' but also by interpersonal antagonisms, community conflict, and tremendous expectations for conspicuous consumption and redistribution, expressing and even exacerbating large-scale social transformations" (p. 569).

Transnationalism, Diaspora, and Cosmopolitanism

In a recent review of anthropological approaches to the study of migration, Steven Vertovec (2010: 3) has claimed that "transnationalism has become one of the fundamental ways of understanding contemporary migrant practices across the multi-disciplinary field of migration studies" (see also Vertovec 2009 and Glick Schiller and Faist 2010). He goes on to observe that "the growth of an interest in transnationalism coincided with escalating concerns surrounding the many forms and processes of globalization" (p. 4). Cohen (2001: 955) in fact models transnational migration "as a stage specific and predictable process influenced by macroeconomic forces and local economic trends and social practice" suggesting that it offers a way to reconcile debates about dependency versus development outcomes by emphasizing interdependence.

Anthropologists, as mentioned above, have perhaps had the longest tradition of carrying out multi-sited field research, working in both sending and receiving areas of migration. Like geographers (see Chap. 1 by Wright and Ellis in this volume), they have embraced the concept of transnationalism to capture a social process whereby migrants operate in social fields that transgress geographic, political, and cultural borders (Glick Schiller et al. 1992: ix; see also Basch et al. 1994). Clearly, internal migrants often operate in at least two social fields, the rural and the urban, but the concept of transnationalism, precisely because it implies social fields that cross national borders, has most often been applied to international migrations (Gamburd 2000; Levitt 2001; Hirsch 2003a; England 2006). Those who have adopted the transnational framework have written about transnational identities that challenge processes of immigrant assimilation or incorporation (Panagakos 2003; Koven 2004; DeJaeghere and McCleary 2010); about variations in transnational practices at both the individual and institutional level (Cohen 2001; Mankekar 2002; Riccio 2001; Tsuda 2003; Chu 2010), including the structural violence that is associated with a transnational proletariat and the strategic transnationalism associated with more elite movers (Gardner 2010); about transnational families (Bryceson and Vuorela 2002; Olwig 2002; Chamberlain 2004) and the role of gender in transnationalism (Mahler and Pessar 2001; Mand 2002; Salih 2003); about transnational households and rituals (Gardner 2002a, b; Salih 2002; Al-Ali 2002) and transnational religious practice (Levitt 2003; Grillo 2004); about transnational citizenship and other policies that foster an enduring relationship between state and their nationals abroad (Panagakos 1998; Harney 2002; Richman 2008); and about transnational development projects in countries of origin with which migrants engage (Grillo and Riccio 2004; Riccio 2011).

Conceived as social action in "a multidimensional global space with unbounded, often discontinuous and interpenetrating sub-spaces" (Kearney 1995: 549), transnationalism is closely linked with broader interests emerging from postmodernist theory to theorize space and place in new ways. One outcome of this work is research on diasporic communities and the concomitant re-theorization of the concept of diaspora itself (Shukla 2001; Tseng 2002; Werbner

2002a, b; Axel 2004; Anderson and Lee 2005; Dufoix 2008; Berg 2009). Laguerre (1998: 8, 10) defines diaspora as "displacement and reattachment.... It refers to re-rootedness, that is living in another state, and implies transnationality in its relations with the homeland.... The diasporic subject is located vis-a- vis two states: the host state where he is considered to be a hyphenated citizen, and the homeland where he is identified as an insider/outsider, not a foreigner, but someone whose allegiance is shared with another nation state." Werbner (2004: 896) suggests that considerations of diaspora "probe far deeper into the cultural constitution of transnational connections as an emergent reality in the place of migration. Diasporic communities create arenas for debate and celebration. As mobilised groups, they are cultural, economic, political and social formations *in process*.... Diasporas are full of division and dissent. At the same time they recognize collective responsibilities, not only to the home country but also to co-ethnics in far flung places."

Anthropologists have addressed the process of diaspora formation (Hinton 2001; Brodwin 2003; Watson 2004) as well as how a "diasporic mode of existence mediates the formation of localized cultures, identities or communities" (Fortier 2000: 17; Olwig 2004; Parreñas and Siu 2007). They have explored questions such as the construction of diasporic public spaces in which and through which minority citizenship is negotiated (Werbner 2002a, b); diasporic cyber-spaces of global communication (Bernal 2005); the role of a diasporic concept in immigrant youth education (Lukose 2007; Villenas 2007); the interface between religious identity and disaporic national identity (Hepner 2003); and the tensions that characterize diaspora-homeland relations (Winland 2002). They have also embraced the concept of new cosmopolitanism to capture "diaspora in motion" and people who occupy "in-between spaces of identity, culture, and communication" (Rajan and Sharma 2006: 3; Delugan 2010). With a somewhat different twist, Ruth Mandel (2008) analyzes the "cosmopolitan anxieties" of Germans who perceive themselves as belonging to a global culture on the one hand but on the other hand do not easily accept the presence of cosmopolitan Turks in their midst. While the concepts of diaspora and cosmopolitanism have most often been applied to studies of international migrants, Pellow (2011), based on research on the elite community of Dagomba from northern Ghana, has recently illustrated the utility of these analytical frameworks in understanding the experience of migrants who move within states rather than across state borders. She draws on Rubin Patterson's definition of diaspora as "a people dispersed from their original homeland, a people possessing a collective memory and myth about and sentimental and/or material links to that homeland, which fosters a sense of sympathy and solidarity with co-ethnic diasporans and with putative brethren in the ancestral homeland" (Patterson 2006: 1896; quoted in Pellow 2011: 133). Members of the Dagomba elite develop a bicultural orientation as part of their experience of migration. "They preserve customs and maintain ties with the old, but they also celebrate cultural impurity and hybridity as they take leave of the certain to intermingle with new kinds of people and engage in new practices" (p. 144).

All of this work on transnationalism, diaspora, and cosmopolitanism demonstrates how identities are negotiated and constructed within complex spaces that are local, national, and global simultaneously. Based on his research among Japanese Brazilians who have migrated back to Japan, Tsuda (2007: 247) most directly outlines the implications of the transnational framework for our understanding of ethnic identity, a concept long at the center of anthropological studies of migration (Brettell 2008a; Vertovec 2010). Tsuda argues that rather than being viewed as "something that is racially inscribed (essentialized)", ethnic identity should instead be seen as "something that is culturally contingent and actively negotiated in various contexts (deessentialized)." He continues: "Racially essentialized ethnic identities become harder to sustain under transnational migration because it disengages relatively static ethnic

meanings from a certain locale and re-engages them in a new social context, causing them to be challenged and redefined." Tsuda suggests that the situated nature of ethnic identity, as originally formulated by Fredrik Barth (1969), "becomes more apparent among diasporic peoples, making it subject to continued contestation and renegotiation."

The transnational framework has challenged ideas about borders, and particularly national borders. Donnan and Wilson (1999) have traced the history of the anthropological study of borders, addressing in particular "how people experience the nation and state in their everyday lives at international borders" (p. xiii). They describe borderlands as "sites and symbols of power" (p. 1). In the process they note (p. 9) that anthropology itself has undergone transformation with new theories that "liberate notions of space, place and time from assumptions about their connection to the supposedly natural units of nation, state, identity and culture. These new theories regard space as the conceptual map which orders social life. Space is. . . the imagined physical relationships which give meaning to society. Place. . . is the distinct space where people live." By definition, international migration involves crossing legal and political borders that can be closed or open, guarded or unattended, effective or penetrated. Further, people meet in borderlands creating what some have referred to as hybrid cultures and hybrid identities. In important work that explores the dimensions of borders and borderlands in relation to immigration, Cunningham and Heyman (2004) note that contemporary approaches to borders focus on state theories and processes of surveillance, and that more generally the study of borders is the study of unequal and relational processes that are central to social and cultural theory (p. 290). They formulate a mobilities-enclosure continuum to describe borders "as sites where movement is structured within the context of unequal power relations" (p. 293). "Enclosures and mobilities thus join at borders, in the multifarious processes of entering, avoiding, detecting, classifying, inspecting, interdicting, facilitating, and revaluing that are borders of everyday routine" (Cunningham and Heyman 2004: 295). This interrogation of the multifaceted meaning of borders is clearly more germane to the study of international migration than to internal migration.

Some time ago, Akhil Gupta and James Ferguson (1992: 9) observed that "we live in a world where identities increasingly come to be, if not wholly deterritorialized, at least differently territorialized. Refugees, migrants, displaced and stateless peoples—these are perhaps the first to live these realities in their most complete form". The transnational framework of analysis in anthropology captures these processes of deterritorialization and reterritorialization, and in the process has generated new ideas about the representation and incorporation of migrants. It has helped to generate innovative research and analysis of borders, borderlands, diasporas, and cosmopolitanism. It has emphasized that immigrants in the transnational and global world are involved in the nation-building of more than one state; thus national identities are not only blurred but also negotiated and constructed.

Immigrants, Citizenship, and Political Mobilization

Some anthropologists have recently argued that the transnational arrangements forged by migrants present a challenge to the political and cultural authority of the state and are therefore beginning to address the question of citizenship from a transnational perspective (Glick Schiller and Fouron 2001) and, by extension, complicate our understandings of citizenship. As Michel Laguerre (1998: 177) has written, "Given the fact that these transnational practices occur on an everyday basis, it seems that our concept of citizenship is no longer consistent with the domain of practice. The moment seems appropriate to conceptualize the issue of diasporic citizenship and the way it is practiced more actively and by a larger group of immigrants in the United States." Laguerre defines diasporic citizenship (1998: 12–13) as a "situation of the individual who

lives outside the boundaries of the nation state to which he or she had formerly held primary allegiance and who experiences through transnational migration . . ..the subjective reality of belonging to two or more nation-states." Laguerre and other anthropologists working on citizenship have been motivated to find an alternative to concepts of assimilation and an alternative that emphasizes agency in processes of belonging and the construction of new identities (Gomberg-Munoz 2010), as well as a more fluid approach that does not imply linear and unidirectional movement. Aihwa Ong's (1999: 112) concept of "flexible citizenship" captures these dimensions. She defines flexible citizenship as the "strategies and effects of mobile managers, technocrats, and professionals seeking to both circumvent and benefit from different nation-state regimes by selecting different sites for investments, work, and family relocation." In her study of Chinese immigrants in Panama, Siu (2005) argues that citizenship should be viewed as "participation and membership in a variety of political communities" (p. 8). Siu (2005: 5) operationalizes the concept of diasporic citizenship as a way to describe "the processes by which diasporic subjects experience and practice cultural and social belonging amid shifting geopolitical circumstances and webs of transnational relations."

Anthropologists explore citizenship as a set of "cultural and social processes rather than simply a political status or juridical contract—a set of rights, entitlements, and obligations—between individuals and a nation-state" (Coll 2010: 7). This approach has its roots in Werbner and Yuval-Davis's (1999: 4) distinction between political science definitions of citizenship that derive from "the relationship between the individual and the state" and those that "define citizenship as a more total relationship, inflected by identity, social positioning, cultural assumptions, institutional practices and a sense of belonging." Important here is Aihwa Ong's (1996: 737) formulation of cultural citizenship to describe a "process of subjectification in the Foucaldian sense of self-making and being-made by power relations that produce consent through schemes of surveillance, discipline, control, and administration." Ong (2003: 15) invokes cultural citizenship to great effect in her study of how Cambodian Americans experience American citizenship by illustrating the "social policies and practices beyond the state that in myriad mundane ways suggest, define, and direct adherence to democratic, racial and market norms of belonging." She suggests that it is in the spaces of encounter, "in the practices directed at newcomers, and the mutual daily interactions that ensue, that the meaning and exercise of citizenship happens" (p. 16).

Ong's approach, which has inspired Horton's (2004) work on how refugees and immigrants interface with the U.S. health care system as either "deserving" or undeserving" citizens, constitutes one dimension of anthropological approaches to the cultural citizenship of immigrants. A second approach emerges from Rosaldo and Flores (1997: 57) more agentic formulation of cultural citizenship as "the right to be different (in terms of race, ethnicity, or native language) with respect to the norms of the dominant national community, without compromising one's right to belong, in the sense of participating in the nation-state's democratic processes." Anthropologists have drawn on this understanding of cultural citizenship to explore immigrant youth culture (Maira 2004), political activism through dance and music groups (Beriss 2004), and other forms of civic engagement (Brettell and Reed Danahay 2012). Flores (2003) employs it to show how both undocumented and legal resident Latino immigrants create spaces for political participation while Stephen (2003: 28), who has studied migrant farm workers in Oregon, argues that cultural citizenship offers "a model for understanding how Mexican migrants in the U.S. can be recognized as legitimate political subjects claiming rights for themselves and their children based on their economic and cultural contributions, regardless of their official legal status" (p. 28).

Some anthropologists draw on both approaches to cultural citizenship. In his book *The Latino Threat*, Leo Chavez (2008) argues that "feelings of belonging and desire for inclusion in the social body exist in a dialectical relationship with the larger society and the

state, which may or may not find such claims for cultural citizenship convincing." Similarly, Kathleen Coll (2010), in her study of the mutual constitution of citizenship and motherhood in the lived experiences of Latin American immigrant women who belong to *Mujeres Unidas y Activas* (a grassroots community organization in San Francisco), offers "a gendered analysis of how social belonging and political agency, the disciplinary forces of nation-states, and individual women's personal experiences and ideas shape the meaning and content of political belonging in their lives" (p. 11). She takes the position that citizenship is a "dynamic, intersubjective, and contentious process" (p. 20).

Although Giordano (2008) invokes cultural citizenship in her study of victims of sexual trafficking in Italy, she also introduces what she calls "confessional citizenship" to describe the legal recognition that is accorded to women who file criminal charges against a trafficker and who go through a program of reeducation. According to Giordano, "being recognized by the state involves the production of a victim narrative… and the commitment to being socialized in what is recognized as the 'Italian way of being' of the female citizen" (p. 589). Finally, in his discussion of how refugees from Laos interface with naturalization preparation curricula, Gordon (2010) refers to "troubled citizenship" to capture the ambivalent feelings about citizenship and belonging held by people who come from places where the United States has been political engaged and hence is partially responsible for their refugee status. He juxtaposes what he calls the "master narrative of citizenship" (p. 3) promulgated in these classes with Laotians own articulations of how they belong. The important point in all these anthropological approaches to citizenship and immigration is that they move us away from conceptions that are focused exclusively on rights toward incorporating issues of identity and belonging as well as responsibilities and participation—that is, the substantive dimensions of citizenship as practice (see also Coutin 2003; Brettell 2008b; Glick Schiller and Caglar 2008).

Interest in these substantive dimensions has led a number of other anthropologists to document cases of grass roots mobilization, civic participation, and enactments of belonging on the part of immigrants (Reed-Danahay and Brettell 2008; Silverstein 2008; Brettell and Reed-Danahay 2012). Beriss (2004) describes the development of associations within the Antillean community in France as a context within which and from which to claim their right to belong and denounce racism. In the process, he argues, they also "reinvent what it means to be French" (p. 21). Pero (2008) also focuses on the associational contexts of political mobilization, but in his case among Latinos in the United Kingdom. He develops his discussion in relation to both structural constraints and opportunities as well as social capital and processes of political socialization. The concept of political opportunity structure also provides the theoretical framework for Garapich's (2008) analysis of two waves of Polish immigrants in Britain and how they mobilize in the public sphere.

Kathleen Coll (2010: 5) has recently observed that any notion that anthropology or ethnography "might contribute to understanding citizenship is relatively new". The corpus of work described above demonstrates the significance of anthropological theorizing about immigrant citizenship, particularly how it is practiced as part of everyday lived experience. Further, drawing on broader theoretical interests in governmentality, surveillance, and discipline deriving from poststructural theorists such as Pierre Bourdieu, Michel Foucault and Louis Althusser, anthropologists have fruitfully investigated the role of the state in processes of subject-making, thereby further elucidating the intersections between structure and agency in processes of citizenship and belonging.

Inclusion and Exclusion: The Reception of Immigrants, Discourses of Immigration, and Racism

Anthropologist Leo Chavez (2001: 302) has suggested that the national agenda of the United States in the twenty-first century "will continue to be about constructing subjects as citizens." But he also argues that a new approach may be necessary, "one that is less concerned with the

erasure of difference. Perhaps a national discourse for the next millennium would get more mileage out of stressing inclusion over exclusion, thus ensuring that all Americans are imagined as part of the national community" (302–303). Chavez and other anthropologists have, in recent years, focused their attention not only on how immigrants are imagined, particularly in the discourse of immigration debates, but also more broadly on the reception of immigrants.

Pioneering work on these topics was carried out by Ralph Grillo (1985) based on research in France. Indeed Grillo (2010: 23) has recently commented on investigations of discursive terrains as a somewhat innovative approach within a discipline focused on local level fieldwork. He argues that when "lives are multisited and/or imbricated in events and processes distant from immediate experience, which nonetheless constantly impinge on them, [fieldwork] cannot be the discipline's end-all it once was (p. 21). Erickson (2011) pursues this discursive analysis in a comparative study of the reception of Muslims in Switzerland and Catalonia, Spain. Focusing on polarization in one context and pluralism in the other, he analyzes the role of ideas about "covivencia" that are deeply rooted in Spanish history but used as a "resource. . .for the mutual accommodation of difference" (p. 116) in present-day Catalonia.

A number of anthropologists have looked at the Italian experience with immigrants. Drawing on field data from Sicily, Jeffrey Cole (1997) calls for theorizing immigrant reception in relation to institutional or structural racism as well as class and regional identities. Nicola Mai (2002) demonstrates the relationship between how Albanian refugees were represented in the media (mostly negatively) during the 1990s and the formulation of a new Italian identity. She suggests that the Albanians were perhaps most "stereotyped, stigmatized and readily associated with criminality and moral degeneration, with particular reference to drug smuggling and sexual exploitation" (p. 82). Angel-Ajani (2002) explores the process by which Italians and the Italian State construct African immigrant women in particular as criminals. Based on research in the city of Bologna, Pero (2007) explores left-wing political constructions of migrants (from the south of Italy) immigrants (from abroad) over time. At first viewed within a socioeconomic framework, migrants eventually came to be viewed in ethnocultural terms. He identifies a mismatch between inclusionary official rhetoric and exclusionary grassroots attitudes, thereby showing "how easily official rhetoric can be 'forgotten' in everyday discourses" (p. 138). He concludes that the Left has changed how it conceptualizes migrants as it has moved from a socialist to a post socialist paradigm. Grillo and Pratt (2002: xxi) observe that many of these ethnographically based studies of local reactions to increasing diversity in Italy "show how the processes of incorporation and exclusion experienced by migrants are shaped by processes and cleavages internal to Italian society, and conversely how the migrant presence has regenerated discourses about Italian unity and diversity." Thus, research on the reception of immigrants reveals much about issues of national identity.

Some of the same issues have been raised by those looking at the reception of immigrants in the United States. Judith Goode (1990), who reframed the relations between newcomers and established residents in a community in Philadelphia as those between host and guest, argues that hosts welcome newcomers "if they try to learn the rules" (126). In this community some of the immigrants have more education and economic power than the established residents, a difference that generates tension. Goode points to the contested arenas and military metaphors (such as "stand the ground") that residents use to express their concern. She also describes the expectations (including being a loyal American) that they hold for newcomers. John Borneman (1998) draws on discourse analysis, theories of representation, and sociologist Erving Goffman's classic work on stigma and labeling to explain the negative reception of Marielitos in the United States who were classified as communists, criminals, and homosexuals. Borneman's metaphor of penetration is further examined by Chavez (2001) who, using a semiotic approach

to analyze national magazine covers since 1965, traces the contours of the immigration debate and by extension how immigrants have been received and constructed. Media images, he argues, both shape and reflect national discourse. He identifies images that are affirmative, neutral, or alarmist and key themes that on the one hand associate immigrants with a flood and other the other with the 4th of July. He finds that in the last decades of the twentieth century "both alarmist and affirmative characterizations of immigrants and immigration have been interwoven into the national discourse on immigration" (p. 299) but that as the century came to a close the alarmist images appeared with greater frequency.

In a more recent book (Chavez 2008), Chavez traces the various stereotypes and prejudices that have been directed towards immigrants from Mexico, expressed through what he calls the "Latino Threat Narrative" that describes Mexicans as an invading force determined to reconquer the land they have lost and in the process destroy the American way of life. Chavez progressively debunks many of the myths associated with this narrative as he critiques the discourse that surrounds Latinos residing in this country. He uses empirical data, by now extensive, to counter arguments that Latino immigrants are unwilling to integrate, unwilling to learn English, come here to have anchor babies, and reproduce at a high rate. Particular debates surrounding issues such as organ transplants for undocumented immigrants, immigrant marches, and the Minutemen along the Arizona-Mexico border, in Chavez's view, inform debates about "who is a legitimate member of society and thus deserving of the privileges of citizenship" (p. 17).

Another dimension of this work on representation and cultural production focuses on how emigrants are constructed in their home countries. In my work on Portuguese emigration I have been attentive to the image of the *brasileiro* in nineteenth century Portuguese literature and his twentieth century counterpart, *o francés* whose goal in life was to make enough money in France to build a new house in his home village (Brettell 1986). Riccio (2005) discusses the ambivalent representations (as heroes and as tricksters) of Senegalese migrants who go to Europe in the popular songs and everyday discourse of Senegal. They are sources of inspiration, to be emulated, individuals to whom one should marry one's daughter; but they are also wasteful and untruthful about the kind of work they do abroad to be big men at home. Riccio draws on Gardner's (1995) work to point to emigration as a "metaphor for power and advancement" and as something that only reinforces further migration, thereby contributing new dimensions to the culture of migration in sending societies that was mentioned above.

An additional example is offered by Osella and Osella (2000) who describe the varying masculine identities of Gulf migrants who return to South India and how these are connected to the life cycle. Their research identifies four important local categories or representations of masculinity that have emerged in association with migration: the *gulfan* migrant, typically an immature unmarried male; the *kallan*, a self-interested maximizer or individualistic anti-social man; the *pavam*, an innocent good-guy, generous to the point of self-destruction; and mature householder status, a successful, social, mature man holding substantial personal wealth, supporting many dependents and clients. Another theme to emerge is the relationship between masculinity and cash: migration appears as particularly relevant to masculinity in its enhanced relationship with money, an externalizable (detachable) form of masculine potency: *maturi*.

This body of research on how immigrants and emigrants are received and/or represented draws non-movers into the frame of analysis, adds an additional dimension to research on and our understanding of a "culture of migration", skillfully operationalizes discourse (verbal and visual) analysis and highlights its relevance to migration studies, and perhaps most importantly focuses attention on the relationship between immigrants or emigrants and narratives of national identity. While the work on reception and representation has been largely focused on

international migrants, it certainly could be applied to the study of internal migrants who are often stigmatized for being rural (Zheng 2003; Chen et al. 2011) or who find themselves the objects of resentment and envy in their sending communities (Smith 2004).

Immigrants, the State, the Law, and Multiculturalism

Ethnographically informed work that addresses the ways in which immigrants intersect with the state focuses not only on dimensions of citizenship (as outlined above) but also on the impact of and everyday experience with restrictive immigration policies including those that result in illegal status (Chock 1994; DeGenova 2002; Smith 2008). These issues are as characteristic of South-South migration flows as they are for South-North flows and they may also have some pertinence to internal migration. As Gardner (2010: 52) observes, based on his interrogation of immigration to Bahrain, "attention to illegality, deportation, and removal focuses the anthropological lens on the processes by which states seek to control the movement of people in particular. . .Illegality, deportation and other forms of removal are tools the state uses to control and govern the transnational movement of people." Some of this research can be situated in relation to broader anthropological investigation of bureaucracies as systems of categorization (Herzfeld 1992) and some of it in relation to anthropological theories of personhood and subjectivity (Ortner 2005; Biehl et al. 2007). For example, based on her fieldwork among Hutu refugees in Tanzania, Liisa Malkki (1996) explores the multiple meanings of the category of refugees. She argues that the specific histories and politics of particular refugee populations are "leached out" by efforts to "constitute the refugee as a singular category of humanity within the international order of things. . .. Refugees suffer from a peculiar kind of speechlessness in the face of national and international organizations whose object of care and control they are" (p. 378). Malkki is critical of the "anonymous corporeality" (p. 388) applied to refugees, a process which both homogenizes and dehumanizes them. Heyman (2001) examines the status classifications of U.S. immigration law and the cultural principles behind them that suggest covert evaluations of moral worth. Using a discursive approach, Plascencia (2009) traces the juridico-political genealogy of the labels "illegal" and "undocumented" in U.S. immigration law and how this has framed both academic and policy approaches to Mexican immigrants. He offers a new set of terms, the "formally and informally unauthorized", as a way to avoid the historical baggage and assumptions (for example, Mexicans as criminals) that the previous terms carry with them. Sarah Willen (2005, Willen 2007a, b), drawing on data from field research in Israel, adopts what she calls a critical phenomenological approach, viewing illegality not only as a juridical status and social condition, but also as a mode of being in the world. Illegality, she argues, "influences how migrants think about and experience time, space, and their bodies in ways that fundamentally structure their basic sense of self" (Willen 2005: 66–67). Finally, in her ethnographic research among undocumented Salvadoran asylum seekers (largely through participant observation at numerous immigration hearings), Susan Bibler Coutin (2003) explores five critical questions: "the sense in which immigration law is powerful; the role of law in constructing and/or challenging identities; the processes through which law is negotiated: the political implications of legal proceedings; and the ways that immigration redefines citizenship and the state" (pp. 8–9). She addresses "how movement, boundaries, persons, and nations are constructed through debates over immigration policies and individual status" (p. 9) noting that an interrogation of these key questions reveal the criteria by which individuals are included or excluded, as well as the meaning of borders, boundaries, and belonging. In her discussion of the undocumented, Coutin (2003: 29ff) refers to the spaces of nonexistence that they occupy. "The undocumented therefore exist in a non domain, a space of illegality. Often conflated with criminals,

unauthorized immigrants are officially outside both the law and the social body."

Another topic that has captured the attention of anthropologists and which is in broad ways connected to the relationship between immigration and the law is the so-called cultural defense. The cultural defense, as Renteln (2004: 5) states, requires "judges to consider the cultural background of litigants in the disposition of cases before them." In her book, Renteln outlines the range of cases in which a cultural defense has been invoked, including homicide and rape, child abuse, custody battles, matters of employment discrimination, the treatment of animals, and the treatment of the dead. In a particular case discussed by Koptiuch (1996), the attorney for a Hmong "tribesman" brought before a judge in the United States to answer criminal charges of kidnapping and rape of a Hmong college coed argued that his client was simply carrying out the cultural ritual of marriage by capture. Criminal charges in this case were dropped in favor of a lesser sentence. In Koptiuch's view, the cultural defense is a form of paternalist and orientalist colonial discourse applied to the empire within. "From a spectacular collapse of space, time, and subjectivity, the law takes license to retrieve a non-historical, primitivized, feminized image of Asia that facilitates. . .the denial of coevalness between Asia and the United States" (Koptiuch 1996: 229). Renteln, on the other hand, frames her discussion in a broader human rights context, arguing that where the exercise of culture as a human right "does not clash with other human rights, it should be protected"; that is, a principle of accommodation should be followed where there is no conflict between culture and other rights (p. 15). Richard Shweder (2003) explores cultural defense cases (which he views as sites of norm conflict) in relation to long-standing debates in anthropology about cultural and moral relativism (i.e. the scope and limits of tolerance) on the one hand, and to national integration policies favoring assimilation or multiculturalism on the other. As a central question he asks "How do the legal and ethical resources and traditions of different nation-states with regard to those issues [such as] (church/state, individual rights/group rights, parental rights/children's rights, private matters/public matters) have a bearing on the social and political management of diversity when dominant cultures and minority cultures collide?" (p. 264). Shweder sees profound implications and challenges for the discipline of anthropology in these issues, asking whether anthropologists will "faithfully represent the native's point of view", will "combat ethnocentrism in the law by educating the general public about the moral decency and rationality of others", or "engage a normative agenda for a multicultural society in an informed and rigorous way" (p. 293).

Clearly, and as Shweder implies, explorations of the cultural defense can be situated within broader debates about assimilation, acculturation, cultural pluralism, and multiculturalism. A number of anthropologists, have interrogated multiculturalism (Modood and Werbner 1997; Glick Schiller 2011). On the one hand multiculturalism has been framed positively in relation to a "politics of recognizing difference" (Grillo and Pratt 2002), while on the other it has been framed negatively in relation to panic about an "excess of alterity" (Grillo 2010). Grillo deconstructs the various parameters of multiculturalism and its meaning in local contexts or national contexts, noting the critique to which it has been subjected for its allegedly divisive character and concluding that the concept is fuzzy at best.

Several anthropologists root their analyses of these issues in particular incidents where law and multiculturalism confront one another. For example, Bowen (2007) offers a detailed discussion of the 2004 law in France that banned headscarves (and by extension religious clothing) from public schools. Key principles of the French Republic and French identity (secularism and communalism) are at the center of the debate which also illustrates, in Bowen's view, the "particularly French passion for seeking statutory solutions to social ills" (p. 243). Bowen also uses this case to explore the role of the media in social and cultural life, particularly to what kind of Muslim they accord the right to speak (p. 246) and hence what kind of Muslim is found to be acceptable in a country that emphasizes

assimilation rather than multiculturalism. In a more recent book, Bowen (2010) takes up the Muslim immigrant perspective on how to be Muslim in France. Tarlo (2010) explores the use of the *hijab* and other items of Muslim female dress in the context of Britain, a society with a more multicultural approach to immigrant integration by comparison with France. She highlights the diversity of modern Muslim perspectives on faith, politics, ethics, aesthetics and belonging through the sartorial choices that are made, suggesting that the relationship between dress and multiculturalism is complex and unevenly distributed across the London landscape. This complexity becomes most evident in one chapter of the book where Tarlo discusses a controversy regarding the right of a young Muslim woman to wear a *jilbab* (the long black garment) to a school that already had developed a Muslim-sympathetic uniform option that was approved as appropriate by many Muslim religious authorities in the country. This case was taken all the way through the High Court, the Court of Appeals, and the House of Lords with decisions made and reversed along the way. Tarlo's analysis highlights the conflicts and tensions, including the political agendas, that are an integral aspect of the multiculturalist project.

Perhaps the most complicated and provocative analysis of European multiculturalism is found in the work of the Norwegian anthropologist Unni Wikan (2002, 2008) who not only explores how liberal and illiberal societies confront one another, but also argues that there has been an excessive tolerance for difference that has resulted in a "generous betrayal" of immigrant newcomers. Culture, in her view, has become a bit like race, a concept that subverts human rights, particularly those of women and children, as it supports ethnic difference and identity politics. Wikan writes (2002: 81): "Whereas Norwegians generally regard other Norwegians as individuals with a different character and the ability and will to think for themselves, immigrants are largely perceived as *products* of culture. They are perceived as caught in the grips of culture and therefore unable to exercise independent judgment. . .It is disrespectful and really quite degrading. Unfortunately, immigrants themselves often contribute to such degradation. By constantly invoking 'culture' as explanation (and excuse) for their behavior, they belittle themselves as acting, thinking, willful human beings, and they run down the very qualities that have brought them here: initiative, courage, perseverance." Hers is a powerful critique of the concept of culture and of a multicultural model of integration that ignores intracultural variability. She explores these issues further in her book *In Honor of Fadime* (Wikan 2008), a highly nuanced analysis of the so-called honor-killing, in 2002, of a young Kurdish woman born and raised in Sweden. She juxtaposes the argument that many immigrants have not left their respective countries voluntarily and hence not made a conscious choice to abandon their cultural traditions, with the rights of children who are born abroad and whose identities and cultural choices may be more in line with those of liberal western democracies. Governments of host countries must in her view be sensitive to the conflicts, if not human tragedies, that can emerge from this situation and to the fact that culture is neither static nor inherited but rather is comprised of a multiplicity of views (including those of parents and children) and always changing. Her conclusion, applied to Norway but with broader implications, is that "the critique of the culture concept that is engaging anthropology must be applied with equal force to the situation of immigrants …. Otherwise the result will be racism—wielded in the name of charity" (2002: 83; see also Vertovec 2011).

Conclusion

Anthropologists of migration have pursued a number of new and fruitful directions of research since the 1990s that reflect broader interests in the field to explore how the lives of individuals are shaped by but also shape social and political structures as well as how global and local processes interface in a world of constant cross-

cultural encounter (including virtual encounter). As Chavez (2008: 181) points out, concepts such as fusion, syncretism, blending, hybridization and creolization "reflect the multidimensional, multidirectional, and often unpredictable changes that take place as people and ideas, beliefs, and behaviors collide and interweave into new cultural formations." In his view these processes also mirror the more flexible and "emergent" dimensions of culture that guide anthropological research in the twenty-first century.

Many of the theoretical concepts and frameworks with which anthropologists of migration work can and have been applied equally to internal and international population movements. Both forms of migration draw on similar research methodologies including multi-sited ethnography and the use of narratives; both impact families and gender roles albeit sometimes in different ways depending on context; both involve social networks (a topic not addressed here but certainly pertinent to much anthropological research; see Brettell 2008a); and both involve the maintenance of ties across boundaries be they between countryside and city or one nation state and another. When internal migrants arrive in cities they are, like their international migrant counterparts, equally confronted with complex spaces inhabited by populations of diverse cultural and linguistic backgrounds. Finally, Cati Coe (2011: 159) has recently suggested that issues of citizenship, which tend to imply crossing a national border, can be invoked in studies of internal migration if citizenship is conceived of as civic activism and belonging. She argues for making a concept of distance central to our research as we compare internal and international migration. "Migration scholars should account for how place and distance operate in the everyday lives and social relationships within transnational families, as an important aspect of understanding whether today's international migration is different from past and contemporary practices of social and geographic mobility" (p. 159). Distance, of course, is not just geographical but also social and cultural. The debates over multiculturalism or the use of the cultural defense, as well as other processes of exclusion, may be more pertinent to and intense in their impact on international migrants than on those who move within national boundaries precisely because of dimensions of social and cultural distance.

This concept of distance is just one issue to which anthropologists might direct their attention in future research. Another is a more thorough consideration of intersectionality (that is, taking into account the relationship among categories such gender, race, class, ethnicity, religion, etc.,) as these influence various aspects of the migrant experience. For example, in her study of immigration hearings, Susan Coutin (2003: 11) has argued that "powerful claims about gender, race, class, ethnicity, nationality and historical reality are implicitly and sometimes explicitly at stake." The dimensions of class would seem to be particularly important, something hinted at by Horton (2004) in her call for more exploration of "the neoliberal standards of merit" that are applied in different ways to immigrants who are considered deserving or undeserving, hard-working or law-breakers, model-minorities or freeloaders on society. Indeed, the critique of the model minority concept is rooted in class differences among Asian immigrant populations that are often ignored. In his research on immigrants from the Indian subcontinent in Bahrain, Gardner (2008: 56) problematizes the question of class by distinguishing between proletarian and elite transnationalists. The former refers to "the Indian working class guestworkers, usually men, who left their families in India. Their gaze remains fixed on their home in India, and they are transnational in the sense that their social fields, collectively and individually, are spread between two nations." The elite transnationalists, on the other hand, are professionals, skilled workers and merchants who often bring their families with them. "Their tenure on the island may be short or long but as a community their presence is centuries old." They lead, he suggests, a cosmopolitan existence. As Theodorou (2011: 7) has argued, "as people move so too their class positions" which must be renegotiated "trans-

and multilocally" as part of the effort to construct a sense of belonging. This process of reformulation is certainly a central concern for the Dagomba elites of Ghana described by Pellow (2011). She suggests that the cultural differences that this group confronts as a result of movement to the city "are about change in environment, encounters with variety, and a rise in social class." Their rise in social class is "in part due to their migration to the South—for school, for employment, but migration does not necessarily lead to such a rise in social status, as seen in the case of non-elite Dagomba" (p. 144). There are intra-group differences in class status to which we need to pay more attention if we are to capture population movements in all their diversity. Further focusing on class might lead anthropologists and other scholars of migration to develop more nuanced understandings of the possibilities of pan-ethnic political mobilization or differential engagement with multicultural projects. Do class differences make intra-ethnic or pan-ethnic collaborations more difficult? Greater emphasis on class might also result in more rigorous theorizing about its relationship to constructions of race from within or outside particular immigrant populations. For example, Indian immigrants in the United States have been described as promoting their class identity in order to downplay being linked to a racialized identity (Bhatia 2007). Is this true of other immigrant populations and for whom does this work as a strategy and for whom does it not (for example, African elite immigrants). Finally, more attention should be paid to the impact of migration on social stratification systems and forms of equality and inequality in sending communities (Koenig 2005). What new elites have emerged in association with the consumption patterns, among other things, of migrants?

A number of anthropologists have called for more comparative analyses in the study of migration. As Nancy Foner (2005: 3) has argued, "a comparative analysis can deepen our understanding of migration by raising new questions and research problems and help to evaluate, and in some cases modify, theoretical perspectives and formulate explanations that could not be made on the basis of one case—or one time period—alone." Such comparisons can proceed across different national contexts, between the past and the present, across members of different social classes within a single immigrant population, between men and women, between one immigrant population and another, between one urban center and another, between two distinct sending areas—in short, the possibilities are limitless. This comparative dimension is certainly part of Glick Schiller's (2005) agenda to develop a "theory of locality". She has written that "to understand variations in the migrant experience of settlement and transborder connection, we must take seriously the challenge to not just study locality but to theorize it so that the specificity of locality in relationship to broader forces can be studied and studied comparatively" (p. 61). While this agenda has been to some extent realized by Glick Schiller and Cagler (2011) there is still more analytical comparative work to do regarding the significance of locality. Such comparative work could be carried out by individual anthropologists or by anthropologists working in collaboration. It might also be carried out within an interdisciplinary framework. Indeed, for many of the topics outlined above interdisciplinary perspectives would be invaluable to further refine our understandings of citizenship, or cosmopolitanism, or the mutually constituted relationship between immigrants and the law.

A topic not covered extensively in this essay but for which there is an expanding bibliography, particularly within medical anthropology, is the relationship between immigrants and health (see for example Chavez 2003; Hirsch 2003b; Horton 2004; Willen 2007a, b, 2012). A number of social scientists, anthropologists included, have focused attention on the relationship between migration and the spread of HIV/AIDS in various parts of the world (Herdt 1997; Hirsch et al. 2002; O'Neil et al. 2004; Parrado et al. 2004; Halli et al. 2007). Given the interests in the anthropology of the state that have been alluded to several times above, research that focuses comparatively on how different health care systems (national, privatized, etc.) interface

with immigrants, legal and unauthorized, should provide some intriguing avenues for ethnographic work. Within medical anthropology there are debates about the concept of cultural competence [which includes valuing diversity, managing difference, adapting to the cultural contexts of communities that are served (Goode 2001)] as medical professionals confront populations with different ideas about health, illness, and healing. As Hirsch (2003b: 237) has argued, "the intense focus on culturally appropriate health services and prevention programs cries out for critical analysis because it represents the premier policy discourse through which much of the public sector recognizes and ascribes meaning to differences in immigrant populations." The critical work of medical anthropologists on migrant health should be better integrated with the anthropology of migration for what it contributes to our understanding of broader processes of incorporation, assimilation, or multiculturalism. For example, how immigrant reproduction relates to issues of citizenship, including the current debate over birthright citizenship in the United States as well as the repeal of birthright citizenship in Ireland (Smith 2008) is a topic rich for further exploration that will undoubtedly shed further light not only on multicultural or assimilative projects but also lead to more comprehensive theories of the gendered and embodied dimensions of immigration.

Finally, as interest in a public and engaged anthropology, as well as in human rights, develops it behooves anthropologists of migration to consider, as Wikan (2002: 3) suggests, how to put their "knowledge to work out there in the world." An anthropology of migration, with its attention to multiple voices and the multiple social locations from which people engage the migration process, needs to become much more visible beyond the walls of academia and academic debate and discourse. Policy makers need to take into account an anthropology that works from the bottom up that reveals as well as possibly predicts, better than many other disciplines, not only the impact of particular immigration or refugee policies, of educational legislation, or health legislation, but also how immigrants challenge, transform, or resist certain policies (Pero 2011). Issues of inclusion and exclusion as both state projects and individual projects need to be theorized in a more sophisticated way and anthropological approaches are fundamental to such an endeavor.

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Perspectives on Migration Theory – Sociology and Political Science

5

Michael J. White and Colin Johnson

In this chapter, we take up the issue of how sociology and political science have contributed to migration theory. Since demographically oriented migration studies have a long history in sociology, we concentrate on more contemporary considerations, after providing a short history of the evolution of the subject. We discuss both internal and international migration and we concentrate on recent theorizing and empirical work that conceptualizes the migrant as embedded within larger structures—family, household, local community—that help set the conditions for the migrant's actions. We then take up the contributions of political science, imbedding the phenomenon of human geographic mobility in still larger structures and institutions.

One can often conceptualize migration studies into a couple of broad areas, responding to key questions: (1) Why do people move and where? (2) What happens to them after migration? Our discussion will examine both determinants and consequences, touching upon the rapidly growing literature on migrant adaptation or assimilation. Throughout we endeavor to point out parallels in the analysis of internal and international migration, a topic treated more generally elsewhere in this volume (see Chap. 6 by Brown and Bean).

A Brief Nod to History

Migration research and theorizing is often traced to the writings of Ravenstein (1885), who formulated his well-known laws of migration.[1] One interesting aspect of Ravenstein's laws is that they were promulgated without explicit regard for social context or, equivalently, the embeddedness of migrants in social structure. At the same time, at least of couple of the laws (return flow, large destination places) would seem to suggest this embeddedness. For instance, the claim that a flow in one direction generates a flow in the opposing direction would seem to suggest that knowledge of, attraction to, and social networks touching the origin community might result in return migration (of the original, primary migrants) or provide information about

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[1] Lee's well-known paper on the migration theory identifies Ravenstein's laws as speaking to the following areas: (1) Migration and distance; (2) Migration by stages; (3) Stream and counterstream; (4) Urban-rural differences in propensity to migrate; (5) Predominance of females among short-distance migrants; (6) Technology and migration; (7) Dominance of the economic motive (Lee 1966). Lee goes on to quote from Ravenstein and expound further. See Wright and Ellis in this volume for further discussion of Ravenstein.

M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_5

that origin location that would, in turn, lead other persons to select it as a destination.

Early work on migration from a sociological vantage point (and any vantage point, really) was limited in the manner in which embeddedness could be captured, in no small measure because of the data sources early empirical writers accessed. Perhaps this is best seen in Thomas's extensive migration study, *Research Memorandum on Migration Differentials* (Thomas 1938). Thomas documented the basic demographic characteristics on which migrants differed from non-migrants: age, sex, education, and the like. In most of Thomas's *Memorandum*, and in much work from that era from any perspective, analysis came from tabular data on persons, with often no information about other individuals or institutions tied to the migrant (or stayer).

Other early work on migration adopted a more theoretical posture. Lee's 1966 article in *Demography* jumped off from Ravenstein's laws. It provided some critical observations and then launched into additional remarks on empirical generalities and causal assertions. Much of this now-classic piece reinforced some of the early observations and theories, such as that of Thomas. Most notable, perhaps, in Lee's article was the attention to selectivity, per se. Lee notes that migration is selective and that, understandably, "persons respond differently to the sets of plus and minus factors at origin and at destination" (Lee 1966, p. 56). It is notable that this wording reinforces the individual, or micro-decision-making, viewpoint regarding migration; in doing so, it also sees the potential mover weighing costs and benefits of staying versus moving to a potential destination. Lee also draws attention to age selectivity of migration and links this in turn to the life cycle and family status considerations. A more recent encapsulation of the phenomenon of selectivity of migration for the United States notes the way in which historical US migrant selectivity operated to exacerbate rural-urban differences (Lichter and Brown 2011).

Migration study in sociology, as in several allied disciplines, has proceeded with internal and international migration travelling on parallel tracks, yet there are many commonalities—age structure, weighing of returns to labor at competing potential destinations—across the two forms of movement. This review will consciously interweave the two thresholds of boundary-crossing.

The Migrant: Individual, Community Member, Node in a Network

Much accumulated writing in the area of migration research has—often somewhat by empirical necessity—treated the migrant as an individual, an atomistic decision-maker and mover. As we discussed above, this accords well with original theory and research developed from microeconomics (see Chap. 3 by Greenwood; Chap. 2 by Wright and Ellis; Chap. 24 by Taylor and Castelhano, in this volume). In this section, we recapitulate some key individual migration differentials and then go on to discuss the migrant as embedded mover.

Migration and Life Cycle: One of the strongest relationships between migration and demographic characteristics is that of age. Migration—whether examined with prospective longitudinal data, or cross-sectional census data—shows a strong age profile. To be sure, the age profile of migration is closely linked to a variety of life course events (Bernard et al. 2014). In fact, the age relationship is patterned enough to have been developed into a model schedule, in keeping with formal demographic work for mortality, fertility, and nuptiality. The most general form of model schedule of migration shows a pronounced inverted U age-pattern through the labor force years, increasing as individuals gain and then collect geographic returns on skills, and then falling as individuals become (often, presumably) more attached to place and possessive of more location and firm specific skills. This basic centerpiece of the curve is complemented by a declining profile from infancy through adolescence (as children move with parents, but less so as they grow), and a small bump linked to retirement migration or return to origin as migrants exit the labor force. While such model schedules were developed to capture regularities in internal labor migration, they also are reflective of international

(labor-oriented) geographical mobility as well. Bernard and co-authors strive to link the empirical regularity of the profile itself to the set of life cycle transitions that generate it (Bernard et al. 2014). The age pattern of migration is so general that it takes a remarkably consistent form, even for internal migration from and to district-sized population units within developing societies (Collinson et al. 2009).

Earlier conventional wisdom often considered sex differentials in migration to point to overrepresentation of males. This, however, is hardly universal. In advanced economies and transition economies, substantial fractions of interregional migrants are female. For instance, tabulations for the United States in 2010–2011 point to nearly identical distributions of males and females across categories of geographical mobility, from nonmover, through local (intracounty) mover, to interregional migrant, to international migration (Bogue 2014). A challenge in disentangling sex differentials in migration stems from sorting out shorter distance moves related to family and household change from longer distance moves related to labor market, social structure or political forces.

Quite commonly, migration is tabulated on the basis of individual movements as a fraction of the population as a whole. Bell and Charles-Edwards (2013) and Bogue (2014) provide such tabulation from a variety of national census and survey sources, enabling the reader to get a broad comparative picture of the variation in migration intensity across populations.

Perhaps more interesting is the recognition of shift over time in the sex ratio (male/female) of migrants. Whereas in an early phase migration, a stream might be dominated by males, the sex ratio may decline with time, as a wider share of the population participates in the movement. For instance, the very large Mexico-US migration stream (both authorized and unauthorized) seems to have been heavily male in its earliest days, linked to direct labor recruitment of males, and gradually shifted to include more females (Cerrutti and Massey 2001). This shift is, perhaps unsurprisingly, linked to the gradual settlement of the migrant (male) population in the (US) destination, followed by family formation and unification. The male settlement itself may have paved the way for independent female migration.

The Mexico-US migration stream is one of the most extensively studied, and such analyses are generally lacking for other regions, especially with respect to the low-income population of the sending region. It is reasonable to suspect that many other migration streams—especially rural-urban streams in developing counties (LDCs/LMICs[2])—may take on an evolution in sex composition as the demographic phenomenon matures.

Other simple differentials have been widely observed. Migrants are often better educated, more skilled, and more motivated than those they leave behind (White and Lindstrom 2005). While sociological approaches to migration have verified these differentials, generally proceeding in parallel with allied social sciences, more interesting analyses arise when one examines the migrant as embedded: in a family or household, community or wider sociopolitical system.

Migration and the Family

The family is the most basic social unit within which the migrant is embedded. Much migratory behavior, internal and international, is linked to family structure. While this is obviously the case and while a well-developed line of theory and empirical research links migratory movement to household-level decision-making and strategizing (Chap. 24 by Taylor and Castelhano, this volume), there is only limited systematic promulgation of data that tabulates migration with respect to family and household structure. Stated in other words, our knowledge of how often individuals move alone rather than simultaneously with others who are part of a family or household unit is severely constrained at present.

[2] Some literatures make use of the abbreviation LMIC for Low and Middle-Income Country, while other prefer LDC for Less Developed Country.

There is, however, now an accumulated stock of knowledge about family context of migration, with much of this coming from more specialized surveys, and often reinforced by or responding to theoretical concerns. Many such efforts date to the late 1980s and early 1990s. Boyd, emphasizing international migration, explicitly brought family networks into the migration process; in fact, she considered that the field had developed to the point that she could write: "There now exist many ways of conceptualizing and studying family, friendship and community ties as key ingredients in international migration" (Boyd 1989, p. 639). While this and other prominent contemporary treatments (Fawcett 1989; Massey 1990) began from the viewpoint of international migration, and were indeed stimulated by the then-recent growth of international migration and an accompanying interest in migration systems, the characterization holds widely, including for internal migration.

Well-developed is the notion that migration is a family strategy. Root and De Jong (1991) point out the competing directions of family structure influence. Ties to kin (and friends) at place of origin might inhibit migration. Root and De Jong cite work from 1935 that argues for a key role of family in developing migration flows from rural to urban areas (Root and De Jong 1991, p. 223, citing Zimmerman and Frampton 1935) in developing countries. Root and De Jong nominate several family-specific considerations that promote or retard migration. These include family pressure to migrate, prior family member migration experience and family resources. Indeed, family considerations, including pressure to migrate, are likely to reflect the family calculus regarding the labor market returns to migration versus staying for various family members. Family is just the most immediate, most circumscribed and arguably the most intense of a set of networks that theoretically could—and empirically do—influence migration. In addition to immediate co-residential family members, networks spiral out to encompass more distant kin and then expand to encompass the broader community, labor market and other networks that condition the potential migrant's behavior.

What evidence is there for the impact of family structure on migration? While theory argues that families and households may strategize with respect to the migration of individual members, the predictions for the direction of the effect vary, and so empirical regularities remain to be determined.

Non-pecuniary Factors in Micro-level Migration

While the bulk of micro-level research on migration developed by considering the potential wage, cost of living, and other such trade-offs for the migrant (even as part of a network), the migration literature has always recognized a wide set of motivating factors that are less readily monetized. The line between economic and seemingly non-economic motivations for migration is not a distinct one; indeed, some theorists or models readily incorporate issues of attachment or sentiment into the migration equation.

Here we briefly touch on several features related to migration that involve norms, social psychological conditions and the like. One of the broadest treatments of migration decision-making is due to Speare et al. (1975). They developed a framework in which the (potential) migrant evaluates present circumstances and considers alternatives. The considerations include more than the conventional wage and employment conditions at these locations, but also are expanded to include psychological factors (Speare et al. 1975). Along these lines, De Jong explicitly invokes expectations and norms in the process of migration. Both of these studies, for the United States (Speare et al. 1975) and for the developing setting of Thailand (De Jong 2000), aim to try out these ideas with empirical analysis. De Jong is clear about the possible contribution of gender roles and family migration norms, where the latter is operationalized as an attitude encouraging or discouraging migration on the part of the family member. This family migration norm measure does predict both temporary and permanent migration in the Thailand sample (De Jong

2000), although it must be recognized that the expression of the view itself may reflect underlying processes. Notably, though, other variables measuring subjective expectations were not strongly predictive of these behaviors in the same model.

Stepping back from these earlier efforts, one can see that for some time sociologists and others have been interested in going beyond the most basic measures of economic conditions. At the same time, it may be fair to say that, across a number of disciplines, efforts to conceptualize and model migration decision-making have begun to converge. To be sure, economists (see Chap. 3 by Greenwood in this volume), geographers (see Chap. 2 by Wright and Ellis, this volume) and anthropologists (see Chap. 4 by Brettell, this volume) have looked beyond pecuniary factors in migration. All this is to say that attachment to home community, family strategies and attachments, and perceptions (or norms) all impinge on migration.

A couple of features of the research landscape on internal and international migration are new, however. One, as mentioned earlier, is the growing availability and richness of longitudinal data. Thus, rather than limitations of tabulations from spare census questions, new surveys can delve into reasons for migration and social context asked directly of the migrant herself or himself. The second, somewhat related trend is a movement toward causal modeling. We touch on these in our conclusions.

Migration, Social Networks and Community

Conceptualized more broadly, many in the migration field see origin and destination communities as linked through migration. Thus, a relatively dense (if not always readily discoverable) network with many cross-cutting ties might serve to reinforce the connections between origin and destination. Aligned with this is the fact that migration is often described as a "system" in which certain communities—presumptively with stronger ties and denser networks, are more tightly linked. These links may, in fact, be the manifestation of past flows (including a reverse flow à la Ravenstein) and create the potential for greater movement in the current period. Root and De Jong describe this in terms of "linkage to the system" (Root and De Jong 1991, p. 223). For sure, the relationship between migration and social networks is a topic of sharply increased interest in recent years. What is more, data have now become available to provide tests of propositions about these relationships. Social networks have long been recognized as important in migration (see the discussion in Aguilera and Massey 2003), although more recent writing tends to recognize more refined and contemporary concepts, such as social capital, and empirical work can draw on richer data with which to examine related ideas about networks, although not always with the straightforward results sometimes anticipated. And from the viewpoint of political and community participation, Goodman and Hiskey have explored how migration and transnationality might influence involvement in local communities (Goodman and Hiskey 2008).

From a theoretical perspective, networks and community can influence migration in several ways. First, networks provide *information*. Critically this information can be both about the location itself (housing costs, living conditions) and employment opportunities. The human connections between origin and destination presumably convey information. Since information reduces uncertainty, perhaps the cost of migration accordingly reduces. Such information also can defray migration's "psychic costs," a phrase that has been widely used in the migration literature. It would seemingly convey both the strict information and the apprehension the potential migrant might have about starting out in a new location.

Second, networks can provide *preliminary infrastructure* at the destination. The challenge of making one's way in a new location can be partially offset by friends and relatives who are already established in the destination. They can

provide housing, sustenance and, of course, even more detailed information. The very existence of the network and the flow of information can also reduce the future costs in communication with (or periodically returning to) the origin. Such interpersonal resources constitute social capital, the set of ties that inhere among individuals who provide resources. In this way, social capital can play a complementary role in origin and destination, facilitating relocation and then (as discussed below) adjusting in the destination. Social capital is likely to operate across all types and geographies of migration (Haug 2008).

Community is a third factor that may also influence migration, beyond the provision of networks. Community norms—to stay at the origin or, conversely, to break out and demonstrate independence—may shift the propensity to migrate. While it would be difficult to assess, community membership also conditions the flow and interpretation of information related to migration (safety, job prospects, commodiousness of the destination environment). Even more, a community might support a culture of migration (Kandel and Massey 2002), where long-distance movement comes to be expected. As argued by VanWey, home community institutions introduce obligations on the potential or actual migrant and condition behavior. Meeting obligation to the home community can influence the social standing of the migrant's family members who remain behind (VanWey 2007; Van Wey et al. 2005). While most of these network connections are seen as reducing the costs of migration, both monetary and psychic, they could also perhaps operate to restrain migration on the part of those who might otherwise (at least via some cost-benefit calculus) be expected to move. Family pressure may be exerted to remain at home or nearby. And it is likely the case that information remains better about various characteristics of the origin than the destination.

These are theoretical considerations. What seems to be the case with regard to the role of networks in the actual movement of persons? Curran and Rivero-Fuentes (2003) argue, for instance, that females encounter greater familial resistance with regard to international migration.

Curran and Saguy push further and integrate the consideration of social networks (as one of three newer streams in migration research) with an aim to bridge international and internal migration, as well as both temporary and permanent migration. They argue further that social networks "also transmit values and cultural perceptions" (Curran and Saguy 2001, p. 59).

Perhaps the most extensive examination of networks and their influence on migration has come through the Mexican Migration Project (expanded subsequently into the Latin American Migration Project), an effort to gather longitudinal survey data encompassing both residential histories and data on many of the sociological influences on migrants and potential migrants. In extensive work employing MMP data, Curran and Rivero-Fuentes (2003) found that networks did matter and mattered differentially by type of move and sex of migrant. Concentrating on household-based migration networks, they find that access to such a network matters for both males and females for international migration, but internal migration (within Mexico) is facilitated only by female migrant networks. They attribute this gender differential importantly to the historical evolution, and thus scale, of female internal migration, likely producing denser and more informative networks. Munshi brings this sociological frame and the MMP data into an economist's analysis and finds evidence that networks confer benefits in employment opportunities for migrants. He writes of the general beneficence of networks, "preexisting social ties ensure that he [the migrant] receives various forms of assistance from those members of the community who happen to be established at the destination when he does arrive" (Munshi 2003).

Even in high income contexts, networks matter, although not necessarily in the same way. Social networks influence job searches, particularly in providing conduits of information about employment or entrepreneurial opportunities (Light et al. 1993). Migration for a job can be viewed as a costly search process (Rogerson and MacKinnon 1981) and a key factor expediting the search or serving to favor one potential

destination over another. In the Mexico-US migration system, there is empirical evidence that suggests that children growing up in migrant households have access to information and social networks that improve their chances of success in the US destination (Kandel and Kao 2001). Again these, networks may operate on international migration streams (Aguilera and Massey 2003) or internal migration streams (Garip 2008; Lall and Selod 2006; Roberts 2001). Even early empirical work for rural-urban migration in India identified the importance of network (especially kin-based) structures for providing information, lowering psychic costs and providing material assistance (Banerjee 1983). Thus, social networks in a destination—a form of social capital—provide a means through which family presence might reduce psychic costs (Greenwood et al. 1991). While it is well established that family structures (marriage, i.e., tied migrant status; size of family; and presence of children) operate to condition migration propensity (Mincer 1978; Greenwood et al. 1991), we are only beginning to learn more about how kinship (and community) networks alter and direct migrants' paths toward economic opportunities (Garip 2008).

Network influence may go well beyond outcomes for the migrants themselves. For sure, monetary remittances may benefit the origin household and wider community. Donato and Duncan, using data from the Health and Migration Survey—a survey that includes respondents in both the United States and Mexico—turn attention to several issues pertaining to migration, networks, and selectivity, and their influences on health outcomes. Analysis of these binational data indicates that Mexican origin children living with their (migrant) parents in the United States experience health outcomes superior to children in households remaining in Mexico. Notably, however, children in return migrant households—those households in Mexico where the parent has migrated to the US and returned—display outcomes worse than either of these (Donato and Duncan 2011). Donato and Duncan argue that these disparate outcomes are conditioned on the social network ties among Mexican families. Monetary remittances, as discussed above and below, have received increasing attention from scholars of migration. Remittances have a distinct community component as well. There is plenty of evidence that these financial flows benefit overall development in sending communities, as well as provide migrant-sending households protection from swings in local economic conditions (de Haas 2007). The very fact that pioneer migrants differ in measurable characteristics from those who follow suggests the way in which risk, information and networks may evolve to generate and sustain a flow of persons (Lindstrom and Lopez-Ramirez 2010).

There is more to remittances than money, however. In addition to financial flows, interest has expanded to include the role of *social remittances*, the transfer of ideas or information through these networks. More recent writing on social remittance has emphasized their dual nature: transmitting cultural values and information both to and from origin and destination, potentially both positive and negative (Levitt and Lamba-Nieves 2011). While the concept of social remittances arguably enjoys widest currency in the literature on international migration (Levitt 1998), it applies well to internal migration, especially in developing country settings. In the case of LDC/LMIC internal migration, social remittances might include information about education and livelihoods, health practices and values, and the like. While research on social remittances, per se, is less pronounced for developing settings, certainly parallel work on access and exchange, implicit in studies that invoke distance as a key variable, suggests the value of the concept.[3]

[3] The general concept has broad and deep origins. Consider this comment about the development of the early nineteenth-century national road in the United States: "...the most important freight a road carries may be neither household goods, nor livestock, nor munitions of war—but ideas!" (Stewart 1953, quoted in Vale and Vale 1983).

Migration and Destination Adaptation

The other side of the migration coin is, of course, the destination. Here, too, an extensive literature has formed, with contributions from across the social sciences. While public discourse often questions the benefits of migration, the bulk of empirical research—whether with respect to internal or international population movement—suggests that migration provides a net benefit to both the migrant and the host society.[4] For the most part, internal migrants themselves report being better off in the destination (White and Lindstrom 2005), despite the apparent disadvantaged conditions some observers see. Along these lines, empirical studies typically conclude that with time, migrants, both international and internal as well as within and across generations, climb up the ladder of socioeconomic success (White and Glick 2009) and that the redistribution of population can benefit the receiving society (Edmonston and Smith 1997) and can aid the development process (Clemens and Bazzi 2008).

Many of the factors that play a role in the determinants of migration also play an equivalent role in the consequences of migration, specifically the socioeconomic assimilation and acculturation of internal and international migrants at the destination. Just as one may take from the literature the idea that social capital—ties as resources—can aid the migrant at the outset in mounting the migration and determining the destination, so, too, can social capital facilitate adjustment in the destination (Kao 2004; Kao and Rutherford 2007). Extended kin and co-ethnics, previous migrants and others can help the migrant find housing and a job and negotiate the day-to-day exigencies of life in a foreign place, whether that be a country across an ocean or a megacity some hundreds of kilometers from a rural homestead. These resources are all relevant to the probability of success and the rate of adjustment in the destination.

[4] As with any social process, however, there are winners and losers.

International migration typically generates additional ethnic diversity in the host society. Examining the successful or unsuccessful integration of migrants to the host society is the mainstay of a large literature on racial and ethnic patterns. This literature has grown to a scale far beyond what we can examine here, but a number of reviews do capture important features of the discussion and some of the varying interpretations (Waters and Jimenez 2005; Alba and Nee 2009). Waters and Jimenez, after reviewing the US case, conclude that "most careful sociological research supports the notion that immigrants are being successfully incorporated into American society" (Waters and Jimenez 2005, p. 121). Such findings are echoed in other US-based studies of immigrant adaptation, although variation across outcomes is apparent as well (Alba and Nee 2009; White and Glick 2009). Within this generally sanguine assessment, it is also clear that assimilation is multidimensional and does not necessarily proceed with universality across groups (Lee and Bean 2010). Brown, for instance, speaks of delayed "spatial assimilation" to characterize the circumstances of the urban Mexican immigrant population in the United States, for whom neighborhood spatial assimilation (integration) lags behind individual socioeconomic gains (Brown 2007). While the research repository is not as extensive for high-income host countries outside of North America, some contemporary assessment points to assimilation in a wide array of settings. Alba's comparative study points out the varying circumstances and outcomes in large wealthy host societies, where it is clear that immigrant integration differs in many ways but there is also evidence for this integration in multiple societies (Alba 2005).

Besides the overall examination of whether immigrants are assimilating or successfully being integrated into their new host societies, multiple studies call attention to other features of the theoretical landscape on which assimilation plays out. Waters and Jimenez, for instance, emphasize four dimensions on which assimilation might be measured and judged: socioeconomic status, spatial concentration (dispersion),

language acquisition and intermarriage (Waters and Jimenez 2005). Bean and co-authors, focusing on the large Mexican-origin migrant population, also see broader trends for integration, concluding, "many are undergoing changes that knit them more closely into the political and economic fabric of the country" (Bean et al. 2006, p. 312). Whereas earlier studies—and the theory on which they drew—more than likely emphasized adoption of the host societies' cultural traits with Anglo-conformity often being the phrase for the United States literature, more contemporary studies would tend to focus on socioeconomic and other structural characteristics. The theoretical literature, both as grounded in immigrant adaption and more generally in ethnic and racial studies, brings to the fore the notion of boundaries and their theoretical importance. Indeed, the existence and evolution of boundaries and the boundary-making process itself are highly pertinent to the study of ethnic groups and to social processes more generally (Lamont and Molnar 2002), and social and spatial boundaries themselves intersect as one looks at the geographic dispersion of immigrants (Lichter and Brown 2011). To be sure, the process of international migration is so long-standing, so complex in terms of origins and destination, and so multidimensional, that no comprehensive theory is likely to usefully and simply capture the experience in general fashion.

In the sociological literature, the phrase "context of reception" often is chosen to capture the range of institutional factors that condition outcomes. While the argument might be advanced that the bulk of immigrants are better off in the destination than the origin, and that they gain in well-being and social integration with the host society over time, this does not mean equivalent assimilation paths or parallel tracks. It is quite the contrary. A number of sociologically oriented writers have argued for the varied context of reception (Menjivar 1997; Portes and Böröcz 1989). Of consequence, the context of reception can result in quite different outcomes in school or other spheres of life for immigrants and the second generation. Taken a step further, the differential paths of immigrant and second generation adjustment may result in *segmented assimilation*, in which race (or by extension some other minority group status) can redirect the assimilation path in a more or less successful trajectory (Portes and Zhou 1993; Portes and Rumbaut 2001). This segmentation is typically considered to emerge into one of three outcomes with respect to acculturation: dissonant, consonant and selective. While some evidence for segmentated assimilation has been found among racial and ethnic minorities in the US, the empirical generality of the phenomenon remains an issue. Empirical results for the US seem to provide some support for the idea (Hirschman 2001) depending how one specifies segmentation (White and Glick 2009), although authors abstracting from one major assimilation study in contemporary New York City argue that dissonant acculturation is the exception, rather than the norm (Waters et al. 2010). Although likely operating with less comprehensive empirical evidence, still other scholars have asked whether the concept applies equally well outside of the United States. Vermeulen argues that segmented assimilation theory is both comprehensive and highly contested (Vermeulen 2010). After some examination (and critique) of downward assimilation in the United States and Europe, he does suggest that the concept may apply well to the European case. But others see the application to France as more problematic (Silberman et al. 2007). Boyd questions the applicability of the segmentation model on theoretical grounds for Canada and then finds empirically that "visible" minority members of the second generation do not have inferior educational outcomes, as the theory might suggest (Boyd 2002). The jury is still out on the matter of segmented assimilation. Nevertheless, the concept is certain to shape debate about the immigrant adjustment experience.

One might now ask about trajectories of adjustment for internal migrants, say rural-urban migrants in developing settings. Arguably, such migrants are transiting significant cultural space. Often migrants speak a different dialect—even a language unintelligible to urban locals—and possess a series of norms and practices that

deviate from those in the destination. These differences may range from things as simple as preferred diet and music, to perhaps much more consequential variation along the lines of health-seeking behavior, views about childbearing, and notions of proper investments in skill-building for children. While we have argued that the social science view is often one of perceived advantage springing from migration, the variation in experience and the determinants of variation across internal migration assimilation outcomes is arguably less well formulated and less well documented with research. Might there not be a parallel set of arguments (and disputes) that characterize the internal migration case?

Theory predicts more auspicious outcomes (more rapid assimilation) among internal migrants if they have greater human capital, typically education or specialized skills needed in the destination (city). Empirical work tends to buttress these elements of theory, but the way in which ethnic origin or social networks condition (urban) acculturation or socioeconomic advancement is less well understood. The way in which larger structures, institutions and politico-governmental structures also impinge on migrant success, particularly differential internal migrant success across time and space, is a subject worthy of further consideration, and one to which we now turn.

Migration and Political Structures

For political science, migration does not share the same foundational role it enjoys in demography. That is not to say migration is aberrant in the discipline. As scholars have noted, repressive political regimes, such as feudal Europe or contemporary North Korea, have sought to control international and internal migration to maintain extractive economic conditions (Castles 2004) and to punish political opponents through exile (Shain 1989). Even in Western European states experiencing increasing rates of long-term migration in recent decades, immigration policy remains a facet of population control that liberal, democratic states have continued to use to assert sovereignty, and as such, migration has become part of mainstream political science in North American and European academia. The field can generally be broken down into two basic questions: (1) Does migration affect individual political behavior? and (2) Does migration affect state or institutional behavior? It is this latter question that engages political science's expertise and "brings the state back in" (Evans et al. 1985). In a seminal piece for the field, Hammar (1985, 1990) established a dichotomy in international migration policies[5]: those that seek to regulate migration and those that seek to provide for migrants' integration. By discerning policies in this way, we can recognize that completely separate political processes determine the observable outcomes for each type of migration policy. From this dichotomy we can began to understand how the state and why the state has become increasingly important to understand processes of migration.

Beginning with theory-building, migration has become an exciting branch within international relations, a separate field of study within political science, to explore the state's relationship to migration. Looking at migration as a macro-process, international relations has delineated a myriad of explanations as to *why* migration is fundamental to a state's prerogative. Early scholars (Castles and Kosack 1973; Castells 1975; Piore 1979; Portes and Walton 1981) present a perspective that resembles the world system's theory from Immanual Wallerstein's (1974) sociological work, in which migration is an instrumental process designed to allow for the exploitation of labor in both sending and receiving states in the hierarchical world system. By contrast, some more recent scholars (Joppke 1998; Hollifield 2004; Kymlicka 2011) have argued that migration is a fundamental ethical concern for democracies, as they challenge the liberal commitment to the

[5] Internal migration is typically of less interest in the field, though a discussion of this can be found later in this chapter.

protection of individuals' rights, especially concerning policies towards citizenship.[6] In the post-9/11 and Global War on Terror (GWOT) environment, migration has increasingly been put at the center of the national security needs of the state (Ben-Gurion 1969; Weiner 1990, 1995; Waever et al. 1993; Alexseev 2006).[7]

This treatment of migration as a critical process for the state is the extrapolation of individual-level theories on migration borrowed from sociology and economics expertise in the field because of political science's relative latecomer status. Migration is typically perceived as a series of "push and pull" factors with economic principles (Bhagwati 1984), wherein individuals migrate to increase utility, however defined, though usually understood as the pursuit of higher wages. This perception of the mechanics behind migration primes political science to ask how states can change policies to incentivize and, in essence, "control" migration.[8] So regardless of the perspective taken on the macro-processes and interactions between states, prescriptive measures are usually at the center of the debate as to how migration can be affected by state behavior. This approach yields the critical "gap hypothesis" in which a state's capacity to control migration is always less than its desire for control, and in liberal democracies, there tends to be expansionary policies despite a desire to constrict migration (Hollifield 1986; Cornelius et al. 1994; Bhagwati 2003). This gap also reinforces the public's frustration with the contentious politics surrounding migration.

The state, however, is not monolithic in its attempts address this gap and considerable research has been devoted to the various means by which state institutions have competing interests as a result of migration. These changes in perspective have the potential to leave the various arms of a state's bureaucracy working to fulfill different goals, leading to different outcomes based on which agency interacts with a migrant (Birrell and Birrell 1981; Whitaker 1987; Calavita 1992; Ellerman 2006). In federal systems, the smaller political units—individual states in the case of the US—have been playing an active role in implementing new enforcement policies, leading to differentiation in policies (Spiro 2001; Wells 2004; Lewis and Ramakrishnan 2007; Varsanyi et al. 2012; Lewis et al. 2013).[9] Inconsistencies between federal and local laws, in addition to suits filed against federal laws, have led to the courts become a leading actor in migration politics by striking down policies and defending the legal rights of migrants (Joppke 1999). Others have argued that the courts have only been able to behave in this manner because of the constitutions in their respective countries (Hansen 2002), while others have focused on international treaties and arbitration as important actors in migration policy shifts, especially in the EU (Orcalli 2007; Lahav and Guiraudon 2006).

These accounts of bureaucratic and judicial actors affecting migration policies contrast from the accounts of changing behaviors among political parties and interest groups that utilize elections to affect migration policies. The electoral success of various conservative parties in Western Europe has received considerable attention (Gibson et al. 2002; Bale 2003; Schain 2006; Van Spanje and Van Der Brug 2007; Messina 2007), as well as "organized public" responses to migration policies by various interest groups (Freeman 1998; Statham and Geddes 2006). This literature focuses on the interests and

[6] Research on citizenship is often considered an important branch of migration politics, sometimes addressed independently of the rest of the field, since changes to citizenship requirements represent the ultimate form of migrant assimilation. For more on citizenship exclusively, see Kymlicka and Norman 1994; Kymlicka 2003; and Varsanyi 2005.

[7] For a far more comprehensive review of the branches of thought within international relations, see Meyers 2000; Money 2010; Hollifield 2012.

[8] For an excellent review of the principle assumptions and perspectives of political economy, see Freeman and Kessler 2008.

[9] In Arizona, for example, failures to achieve immigration reform in 2007 prompted the state to implement a more stringent enforcement policy than federal statutes require (Amuedo-Dorantes et al. 2013).

behavior of groups seeking to either benefit from migration's liberalization or restriction in democratic societies, such as the interesting research that displays the changing position of labor unions in the US (Haus 1995; Watts 2002). Many national migration policies remain more liberal than public opinion data suggests (Freeman 1995), further reinforcing the gap hypothesis, which has led some to argue that interest groups may be more effective than public opinion (Facchini and Mayda 2008).

As research continues to investigate the origins of policies in specific contexts, political science also contributes to migration research by seeking to categorize and compare between migration regimes. Like any other science, there is the drive to create typographies to help identify aberrations and establish crucial characteristics categorization, as demonstrated in Esping-Andersen's work (1990) in welfare politics. Brubaker's recognition of *ju solis* and *ju sanguinis* pathways to citizenship in France and Germany, respectively, was foundational to this field of study (Brubaker 1992), and the field has expanded to develop typologies of policies to assist immigrants' integration. Castles and Miller (2003) propose a typology of integration with three models: exclusionary, assimilationist and multicultural. Yet these categories are not universal. Koopmans et al. (2005) create model types by bringing Brubaker's dichotomy into the integrationist framework, while earlier work from Koopmans and Statham's edited volume (2000) still provides models to better integrate political opportunities. This field remains an exciting branch of research that holds promise to allow more comparative work and refinement of the conceptualization of approaches to migration.

In addition to these contributions to migration politics, political science has focused on the effects of migration on individual behavior, particularly international migration. In American literature, the seminal work on migration's role in affecting the political behavior of the individual is Brown's (1988) investigation of national county-level voting data. Brown's and others' work (MacDonald and Franko 2008) provided evidence that internal migrants in the US moving to a location with an opposing political environment tend to adjust party identification and voting behavior to match their environments. Voting frequency drops due to the migrant often not registering in their new location or being less connected with local political movements (Squire et al. 1987; Burden and Greene 2000; Highton 2000). Yet in this literature, migration is being credited with changing the outcomes in presidential elections and generating new swing states (Hood et al. 2004; Hood and McKee 2010; Moreland and Steed 2004; Scher 1997). As such, this extension of migration politics is open for innovative research in both internal and international migration, the latter of which should integrate sociology's rich field on transnationalism (Itzigsohn 2000), which has been largely unaddressed by political scientists (Bauböck 2003; Escobar et al. 2014).

Similarly, individual-level studies also focus on characteristics that determine support for various immigration policies, often engaging race and urban politics literatures in a dynamic area of research in the American and European contexts. A rich field for comparative research, this branch often takes a probabilistic psychological approach to identifying characteristics that help to determine an individual's support for certain migration policies or political parties.[10] Depending on the political structure of the polities of interest, whether regions or entire countries, the analyses allow us to measure whether racial attitudes, socioeconomic characteristics or political views affect not only migration policy preferences but also electoral outcomes. These studies tend to focus on national-level elections in the European context for comparative work, while American studies typically look at state-level or national-level elections, though perceptions surrounding international migration are primarily of interest in each context. While definitive findings across

[10] This field of migration politics is immense, multidisciplinary and too nuanced to cover succinctly here. For an excellent overview, see Fetzer 2012.

political environments have proven elusive, relative economic deprivation, for example, has pronounced downward effects on individuals' support for open migration policies among those with lower skills or within the lower socioeconomic classes (Money 1999; Fetzer 2000; Kunovich 2004; Alexseev 2006; Gay 2006). These findings, when combined with the electoral analysis of far-right parties as discussed previously, ensure that this branch of research will be a mainstay in our future observations of migration politics.

As international migration has increased in its prevalence as a global phenomenon, new systems and migration streams are developing that can challenge and expand our understanding of the politics surrounding migration. While the literature that has been reviewed here is vast, the overwhelming majority of research conducted concerns migration to Western Europe or North America. The identified avenues of policy change and the avenues for social action are largely based on the assumption of a liberal, Western, democratic political system, which can break down quickly in other contexts, even in the Western states themselves.[11] The overemphasis on the "Western" experience is not without reason, however, as the ample data available from surveys to reliable migration figures has allowed scholars to test a wide array of hypotheses and yield important findings. Focusing so much on this geographic region, however, causes us to neglect important and less well-understood migration flows with global significance.[12]

A prime example of this issue is the case of migration within the former Soviet Union, and in particular, migration to the Russian Federation. Though it can be categorized as a South-to-North migration flow, due to the size of Russia's economy in the 21st century, the lack of transparent and robust democratic political institutions at local and national levels complicates the political narrative one has come to expect from South-to-North flows to Western democracies. Yet the mere presence of this flow is not significant for migration studies; rather it is the sheer volume: Russia is host to the world's second largest immigration population, after the United States.[13] After the economic devastation following the 1998 ruble collapse, Russia's economic resurgence atop high commodity and energy prices has created a large-scale demand for migrant labor. While not achieving or sustaining the growth rates exhibited by China or other rapidly developing economies, Russia's population decline and ageing virtually guarantees a demand for migrant labor of comparable proportions for years to come, though Russia cannot rely on domestic rural migration as China has done (Heleniak 2008). The Russian labor market has relied on the youthful populations in the Caucasus and Central Asia to fill gaps in manual and menial labor, notably construction and trade (Olimova and Bosc 2003; Hemmings 2010). In a little more than a decade, this migration stream has generated the most remittance dependent states in the world, as estimated by the World Bank: Tajikistan and Kyrgyzstan. These two states relied on remittances to substantiate more than 30 % of their annual GDP in recent years, astounding figures in a global context (World Bank 2014).

[11] As discussed previously, the electoral success of far-right parties has generated substantial interest throughout Western Europe, though doubts remain as to whether further electoral success is attainable. In some cases, however, these movements have been successful at achieving their policy goals, threatening the potentially pro-migration avenues of the courts and bureaucracies, which can be constrained by less vague laws and directives, respectively.

[12] For excellent exceptions that have conducted research outside OECD countries, see Richards and Martin 1983; Findlay et al. 2000; Zlotnik 2003; Baldwin-Edwards 2006.

[13] This aggregate statistic is a result of numerous waves of migration into Russia, beginning with the collapse of the Soviet Union, after which millions relocated to the country of their "titular nationality," e.g., Russians to Russia. As this movement began to subside, outbreaks of war in the former republics, such as the civil war in Tajikistan and the war between Azerbaijan and Armenia, caused thousands of refugees to flee to Russia for safety. While these waves of migration account for a considerable portion of Russia's aggregate migrant population, the foreign-born population is an estimated 12 million people (United Nations 2009).

This case brings many of the issues in migration studies to the forefront and begs many questions yet unanswered by political science. The dependence on remittances to this extreme certainly begs for an investigation into the long-term consequences for the development of the "sending states" themselves, a situation shared by other migration dependent nations, such as Lesotho. While the benefits of remittances can be achieved through transparent and dependable financial institutions, the difficulty of stimulating domestic economic growth while an estimated one in three males are working abroad, such as in Tajikistan (Hemmings 2010), cannot be overstated. Yet the question of dependence can also be reversed. For instance, Russia's demographic outlook forces it to be precariously dependent on migration to maintain economic stability. Such dependence is even greater in the case of the Gulf States, where migrant workers have been between 25 and 80 percent of the total population since the 1980s (Roper and Barria 2014). Using immigration to overcome potential demographic issues is hardly a novel concept (United Nations 2001), but the degree to which some migrant-reliant states are able to systematically neglect migrants requires us to the consider the ethics of such strategies across political regimes, as discussed previously.

New Directions

What does the future hold—or demand—regarding migration studies in sociology and political science? While there may be "more of the same" in the sense of needed extensions of contemporary research, there also appears to be opportunity for some major shifts in subject matter and attention. Some major gaps also remain in our knowledge or research infrastructure regarding internal and international migration.

Data and Methods

It is common for members of the research community to decry the state of data. This is as much the case for studies of migration as any other undertaking. Studies of population redistribution by definition invoke *both* geographic and temporal change; it is often difficult to find data—especially in developing settings—that are rich in this regard. Longitudinal geocoded data are preferred for addressing many of the questions in the field, some of which have been mentioned here. There is some reason for optimism, however. Increasingly data collection undertakings have moved in the direction of panel (longitudinal) studies; thus, measurements of characteristics before and after the move are increasingly possible. When collected as a panel, it is a simple matter to identify the location of the respondent at each wave of a survey. Further data management could add identifiers for higher levels of geography in the file at each measurement point. Most promising, simple latitude/longitude coordinates for the sampled household or individual would allow the researcher to append any geographic or contextual information that could be spatially aligned through the coordinate system. The challenges here lie in the field work logistics and expense of obtaining coordinates (likely to be decreasing over time throughout the world) and the security concerns regarding the data that results. Fortunately, progress on secure data management argues for optimism on this front.

In parallel with these developments in data collection, coding, and storage, there has been rapid expansion of procedures for analyzing such data. While other chapters in this volume touch more directly on such aspects, it is worth noting here the development of a wide array of statistical approaches and associated software to handle a variety of estimation challenges. These approaches sometimes travel under different names depending on the field: repeated measures, fixed effects, contextual models, multi-level models. All these provide promise of recognizing and modeling some of the influences of family, community, institutional and political structure on human geographical mobility.

Some other items on the technical horizon include prospects for recording (where permissible) human movement in something approximating "real time." Smart phone

technology has already led to exciting exploratory work on this (Palmer et al. 2013); more robust, representative applications undoubtedly await.

Substantive Horizons and Challenges

While the "mobility transition" may be a paradigm that overreached, it is almost assuredly true that as populations complete the demographic transition—the movement from a regime of high fertility and mortality, to a regime of low fertility and mortality—geographic mobility will have more say in determining the population change in locations. Thus, it is likely there will be increasing concern for measurement and substantive knowledge about migration in the coming years. This applies to high-income countries that have already completed the demographic transition but still see considerable internal migration and are recipients of waves of international migrants, and it applies to low-and-middle income counties, which will experience considerable population redistribution with economic development, while some also experience international movement through refugee resettlement and labor migration within and across world regions.

Do preferred reasons match actual behavior? Here disciplines may only partly converge with regard to what constitutes proper explanation of model specification. The query about migrant expectation asked in a survey and included in a regression (De Jong 2000) tracks a close parallel with the microeconomic model of discounted returns to labor market activity in various (potentially alternative) locations. Are attitudes and expectations merely a representation of underlying economic opportunities differentially distributed across space? Is the willingness to move on the part of some subgroups of the population a manifestation of socialization or norms rather than a straightforward calculation on the basis of differential wages or employment opportunities?

Several challenges and promising developments are identifiable on the substantive side. The increasing concern for context—whether indicators of the policy context of reception or the manner of influence of family and friends—will challenge sociologists and political scientists to develop more nuanced theories of how context influences migration. One thing that comes through in our review is that while all scholars might agree that context matters, exactly how it matters and how certain determinants of migration vary across contexts remains underexplored intellectual territory.

Social scientists value causal models, especially in policy settings, and indeed, much progress has been made on both modeling and experimental research design across the social sciences. Here social and political science face both a seeming roadblock and an exciting challenge for the future. Migration is undeniably highly selective of population; those who move differ in many important ways—some measurable, some not—from those they leave behind. Such a circumstance would argue for a randomized design to see impacts of migration. The thinking exercise would be to randomize (along the lines of a biomedical randomized clinical trial or RCT) some persons to be migrants while others remain stayers. One could then properly infer the effect of migration, at least in this hypothetical example. Yet random assignment to migration (or a more general set of geographic mobility categories) is unlikely to be feasible for both logistical and ethical reasons. Expanding the concern to large scale structures such as institutional settings (labor market policy, institutional racism) and including nation-state structures makes the problem even less tractable. This means that, most likely, the migration field will require high-quality observational data for its studies, even those that aim to shed light on policy. Longer temporal periods and more geographic variation, including across polities, will be desirable.

Natural experiments present another avenue through which analysts can gain purchase on the effects of policies on migration outcomes. Even though natural experiments cannot be designed a priori, they can generate some useful inferences. Some changes in migration policy,

such as instituting visa-free regimes or changes in visa requirements, have specified dates of implementation months or years in advance. Using longitudinal data, it is possible to see whether the implementation of new migration policies affect migration behavior. Visa-free migration regimes not only give potential migrants freedom of movement to multiple national labor markets without needing to formally apply to each state, but the negotiation of these regimes generate highly contentious politics. As visa-free regimes in regional associations or bilateral treaties become more common, along with immigration reform's prominence in Western politics, changes to immigration law, or even the consideration thereof, can provide the means to gain leverage on the extent to which changes in policy affect behavior and perception.

Political and Social Contexts

Migration will continue to be an area of dynamic multidisciplinary research in political science, as the literature extends beyond the Western industrialized core, yet also deepens within this traditional geographic setting. As the EU expands its visa-free regime ever eastward, it will provide opportunities to test hypotheses and compare the new waves of immigration with those in the 2004 membership expansion. More interdisciplinary work with surveys conducted in the US-Mexico migration pathway can help expand our knowledge of the changes in individual political behavior and assist in refining research on transnationalism. Most important for the field, however, is extending our understanding beyond the industrialized, liberal democratic political environment to include more authoritarian and fewer institutionalized political systems (Boswell 2007).

The world's single largest annual bilateral migration flow is between India and Bangladesh, which provides an excellent case to understand how these democracies interact and formulate migration policies in comparison to the models born of the Western democratic experience. Sub-Saharan Africa's uneven development will likely create more stable international migration flows, such as that between Lesotho and South Africa, and Southeast Asia's economic development will lead to interesting interactions between democratic and authoritarian states. These developments will provide the opportunity to test another salient hypothesis in political science: the convergence hypothesis, which posits that receiving states' migration policies will converge as they learn from one another (Cornelius et al. 1994, 2004).

As we consider cases outside the Western experience, we may be able to observe areas where states coordinate policy across regime type, such as regional or bilateral enforcement schemes, but also identify facets of migration policy that remain resistant to convergence, which we can already observe in national migration regimes among individual EU member states. Just as sociology's findings in these new cases will demonstrate the effects of migration on the respective societies, political science should ask how migration is affecting state development and political processes. And yet these questions need not be asked only in their respective disciplines; we should continue to endeavor towards interdisciplinary work and ask these questions simultaneously.

The growing interest in community, context and networks manifests at least as much in migration studies as in other areas of social research and will demand better theorizing (and data) that captures these concepts. How should we think about networks, especially in a world where propinquity matters less, where virtual communities may increasingly supplement neighborhoods and placed-based communities? While one needs to caution that neighborhood, municipality and region are not likely to become meaningless any time soon, the trend seems to be for a larger fraction of one's peer and other influences to come from other peoples and factors that are less geographically proximate. New investigations will aim to understand both the actual mechanisms that influence human behavior and the most promising ways to estimate that influence. Indeed, as we take a glance toward the horizon of migration research from

both sociological and political vantage points, understanding exactly how humans are embedded in larger social structures, from local community to polity, will doubtless remain a challenging, albeit rewarding task.

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Conceptualizing Migration: From Internal/International to Kinds of Membership

6

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Current typologies of migration generally distinguish international from internal migration so markedly that some argue that this gulf constitutes the overarching divide in migration studies (King and Skeldon 2010). Compared with the chasm between internal and international migration, other migration dichotomies, such as voluntary vs. forced, sojourner vs. settler, inception vs. persistence, appear minor in comparison. Some defend the conceptual distinction between internal and international migration as vital for ensuring that the politics of international migration receives adequate consideration (Cohen 1995). But others view it as inhibiting the development of theory (Salt and Kitching 1992; Hugo 2011) by unnecessarily privileging the nation-state as a unit of analysis, particularly when such migration involves the unskilled moving from less developed to more developed countries (King and Skeldon 2010; Ellis 2012).

The conceptual gap between internal and international migration appears to depend on the level of analysis and context. At the micro-analytic level, where migration behavior involves decisions made by individuals or households, international migration generally is explained as simply another form of long-distance migration, albeit one with potentially more costs and barriers. At the macro-analytic level, however, the context of migration matters. If analysts still view migration in behavioral terms, as movements that are part of the demographic transition, or as a response to population growth or development, international migration remains an extension of long-distance migration (Zelinsky1971; Skeldon 2012), although some demographers still preserve theoretical and empirical distinctions between internal and international migration (Davis 1988). But when analysts emphasize migration in legal or political terms, as an outgrowth of the competition of political economies or as a function of the state's ability to determine who qualifies for membership, international migration is viewed as differing fundamentally from internal migration (Zolberg 1981). The conceptual quandary, now decades old but recently revived (Pryor 1981; DeWind and Holdaway 2008; King et al. 2008; Ellis 2012; King and Skeldon 2012), centers on how to reconcile behavioral models of migration with scholarship on state-sanctioned and defined movements. The problem is worth consideration, because the separation of research on international and internal migration, especially across disciplines, hampers efforts to achieve an overview of spatial mobility and an intellectual understanding of the meaning of demographic movements (Hochstadt 1999). In this chapter, we argue that while the difference between internal and international migration remains a critical conceptual divide in migration studies, a focus

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_6

on the difference between authorized and unauthorized migration constitutes an equally fruitful distinction, both theoretically and empirically.

The Cleavage Between International and Internal Migration

Migration generally refers to "relatively permanent changes in residence between specifically designated political or statistical areas, or between type-of-residence areas" (Shryock et al. 1976: 349). This relatively simple statement introduces substantial debates on the meaning of usual residence, the duration that qualifies as permanent or semi-permanent, and the type of political boundary that distinguishes migration from local moving. In the United States, the usual minimal threshold distance for mobility to be considered migration is a county line, although this is admittedly an imperfect criterion; some studies rely on metropolitan areas or state lines (Long 1988; Malloy et al. 2011). The choice of the boundary measurement can affect efforts to explain causes or outcomes of migration (White and Mueser 1988). International migration, of course, requires crossing a national border. By the late twentieth century, most national boundaries separating internal from international migration were generally clear, though not always, as in the cases of migration from Puerto Rico to the United States or of migration amidst parts of sub-Saharan Africa.

Migration studies bridge multiple disciplines, e.g. geography, economics, sociology, history, anthropology, political science, public policy, law, epidemiology and psychology, as other chapters in this section of the volume show. Each brings a different approach, different questions, and often different kinds of data to the study of migration, making generalizations about the field somewhat difficult. Despite long debate that peaked in the 1990s, no overarching theory of migration has emerged, but rather a set of perspectives (e.g. Massey et al. 1998) that cross disciplines and, more recently, call for more middle-range theories (Portes 1997; Castles 2010).

Historically, scholars across fields have recognized a difference between internal and international migration, but the literature suggests that they did not label the difference as critical until the late 1970s – around the time of the rise of international migration studies in general and a more specialized emphasis on what James F. Hollifield and Tom K. Wong call the "politics of international migration" (2015: 229). By that time, as King et al. (2008) argue (with several examples), many major books with "migration" in their titles were referring exclusively to international migration. The chapter in this volume by Richard Wright and Mark Ellis also makes the point that the rise of studies of international migration eclipsed the study of internal migration. Current studies on domestic migration now often single it out as "internal" migration, in a retronym, or back formation, akin to the way we now distinguish clocks as either analog or digital.

Historically, this distinction was far less clear. E.G. Ravenstein (1885, 1889) is generally credited with the first systematic study of migration, based on U.K. census data from 1871 to 1881 and later on data from Europe, the United States and Canada. His first "law" is that most migration moves in particular currents and is short-range. Migrants from the nearby countryside flock to cities, and residents of more remote areas fill in the gaps in the countryside. Urbanites migrate less than the rural. When people migrate great distances, they tend to go to the biggest cities. Women outnumber men in short migrations. Economic motives appear to predominate. Recently, some theorists have argued that the reason Ravenstein did not explicitly distinguish international from internal migration was that he had no real need to, because Europeans in the late nineteenth century generally lived with open borders and open citizenship, though with considerable variation in the timing of the adoption of passports and other state documentation of nationality (Zolberg 1999; Torpey 2000; Wimmer and Glick Schiller 2002). See also the chapters in this volume by Michael J. White and Colin Johnson and by Wright and Ellis.

It is worth noting that this literature sprang up in the United Kingdom. In northwestern Europe, urbanization and emigration in the nineteenth century had led to much consternation among social scientists about the depopulation of the countryside (Thomas 1938; Greenwood and Hunt 2003). In the rapidly growing United States, with its vast frontier, social scientists marveled at the expansion of cities and their suburbs in comparison to the hinterlands (Weber 1899). Ravenstein (1889), however, predicted that migration patterns in North America would become more like Europe's as the population grew denser.

Beginning in earnest in the mid-1920s and early 1930s, American research on internal migration began to test and extend Ravenstein's laws with more micro-analytic data. Before then, the vast international migration from Southern and Eastern Europe had dominated research (Greenwood and Hunt 2003), and the rise of the Chicago School focused attention on urban forms, race relations, and the assimilation of immigrant groups. As immigration waned in the 1920s, several other factors made the study of internal migration more appealing. One was the continuing demand for labor and the resulting Great Migration of blacks from the South (Thomas 1954). A second factor was the explosion of automobiles, which offered more diverse kinds of transportation. A third factor, more prosaic, was the availability of research money. The Committee on Scientific Aspects of Human Migration, appointed in 1924 by the Social Science Research Council (Greenwood and Hunt 2003), funded at least one major study, which as part of its study of internal migration documented the rising popularity of California (Thornthwaite 1934).

As the 1930s and the Depression progressed, the nature of migration changed to less mobility overall but a few large-scale movements, such as the Dust Bowl migration westward. At the same time, the birthrate fell, so that migration took on more importance as a demographic phenomenon. Such events led to more research. New models explaining internal migration included the "push-pull" theory (Heberle 1938), originally illustrated with a German example and later associated with Lee's (1966) updates of Ravenstein's laws; intervening opportunities (Stouffer 1940); gravity models (Zipf 1946); motivations for moving (Rossi 1955); cost-benefit analysis of migration (Sjaastad 1962); place utility (Wolpert 1965); models of migration, employment and expected income (Todaro 1969), and systems modeling rural–urban migration (Mabogunje 1970). (For summaries of such early work, see Thomas 1938; Greenwood 1975; Shaw 1975; Todaro 1980; Greenwood and Hunt 2003. See also the chapter by Michael J. Greenwood in this volume.)

Yet for all this activity, research on internal migration remained "the stepchild of demography" (Kirk 1960: 307). Part of this sidelining of migration, of course, stemmed from the Baby Boom and the speed-up of the demographic transition, whose effects drew attention to human population growth. Bemoaning the lack of attention to migration in 1976, the president of the Population Association of America argued that comprehensive models and theories of migration were still lacking because of doubts about whether general theory applied to both developing and developed countries, the difficulty of relating aggregate migration streams to individual behavior, the difficulty of incorporating structural and social-psychological variables, and inadequate data (Goldstein 1976). At the time, most migration research was based on aggregate information (Greenwood and Hunt 2003), as opposed to studies in other demographic subfields, such as fertility, which had begun to benefit from surveys of individuals and households. Historical demographic work faced similar difficulties, with migration being less studied than other demographic events. One reason was the enormous difficulty of collecting historical data. Another problem was that in contrast to births, deaths or marriage, migration had to be defined in terms of a minimum length and distance. A last reason was that those poring over parish records tended to view migration as a form of bias instead of an object of study (Hochstadt 1999).

From the 1930s through the mid-1960s, if internal migration was seen as the stepchild of demography, international migration was

thought an even more distant relation. Even the largest migration flows of the time – to the new state of Israel, among postwar refugees in Europe, through the partition of India, or through guest workers going from Southern to Northern Europe – attracted relatively little note (but see Eisenstadt 1954; Proudfoot 1956; Kindleberger 1964; Davis 1949 complains of the "scanty" demographic data from India). Insofar as researchers studied American migration empirically, they examined the assimilation of the descendants of immigrants (e.g. Whyte 1993 [1943]; Child 1943; Warner and Srole 1945; Handlin 1952; Dahl 1961; Lieberson 1963; Glazer and Moynihan 1963; Gordon 1964), gradually shifting from assimilationist and human ecological approaches to that of ethnic pluralism. Although the field would take off beginning with the new wave of immigration to the United States after 1965, few studies examined actual immigration to the U.S. between the end of World War II and the passage of the Hart-Celler Act in 1965 (even the 22-year *Bracero* program attracted only a little attention, e.g. Galarza 1964; Grebler 1965). In fact, one economic article published in 1966 began thus:

> Few policy issues have stirred as much emotional reaction and as little empirical work as the alleged large-scale migration of scientists and engineers from the rest of the world to the United States during the last decade. This paper is an attempt to put together various available scraps of empirical information on the basis of which an informed picture of the magnitude of the 'brain drain' to the United States can be formed. (Grubel and Scott 1966: 368)

If the empirical work was rudimentary, so was the theorizing. Most early work about international migration consisted in large part of the construction of typologies. An early, influential schema by Henry Pratt Fairchild (1925 [1913]) stood as pre-eminent scholarship on international migration theory for nearly half a century. Fairchild argued for four primary forms of international migration. These were:

1. Dispersion (slow, unconscious movement into uninhabited territory).
2. Invasion (by what he deemed more primitive societies) and conquest (by more civilized states) – thus, the Roman Empire conquered but was invaded.
3. Colonization and the formation of farms and plantations, against the will of the native population; this form of migration should be considered hostile.
4. Immigration. This form of international migration is distinct from the previous types because it is peaceful and because both sending and receiving states are well-established, share a culture and climate and enjoy roughly similar levels of civilization, though the receiving country was likely to be less densely settled and younger. The motivation for migration rests at the individual level, even if states regulate that movement.

In fact, Fairchild boxed himself in by defining immigration in terms of the European migration to the Americas and Oceania. The sending countries must be well-developed and the immigrants educated. Both sending and receiving countries must refrain from excessive regulation of migrants.

> From the above it appears that immigration must be distinctly a modern movement. . . . Moreover, it seems likely to be a purely temporary phenomenon. With the disappearance of the conditions which differentiate the countries which are now receiving immigrants from the older European countries, it seems probably the immigration will cease, for as far as the human eye can see, there will be no new lands to be opened up for the purpose. (p. 26)

Fairchild also identified two less important forms of migration: forced and internal. He downplayed and distinctly separated internal migration from other forms: "It is only when it involves large masses of people, moving in certain well-defined directions, with a community of motives and purposes, that it deserves to be classed with the great population movements. . . . It is evidently a wholly different matter from the other forms which have been emphasized" (p. 28), though he did not specify why he thought that.

Other sociological approaches to international migration were put forth but did not take root, at least in sociology. Howard Becker (1930), for instance, argued that movement across "politico-geographical" boundaries was just one form of movement. For him, the importance of migration consisted in movement across cultural areas and types of geographical environments, as in moving from a maritime nation to a land-locked one, and needed to be approached as cultural case studies. Echoes of this cultural emphasis appear in the work of historian Patrick Manning (2005), who sees migration as primarily a linguistic and cultural movement. Manning argues (p. 142) that migration is central to nation-building: "National construction is a process in inclusion, in which people are induced to join the 'imagined community' and accept a common identity. But it also involves exclusion: exclusion of foreign powers and of foreign national groups."

In 1958, another typology by William Petersen emerged to supplant Fairchild's. After critiquing Fairchild, Petersen (1958) proposes to refine the general "push-pull" explanation for migration by setting up five classes of migration as a tool for understanding migration patterns:

1. Primitive, or pushed by environmental factors; this encompasses wandering peoples as well as nomads and those forced to move by famine.
2. Forced, when migrants have no choice in whether to leave, as when they are displaced or sold into slavery.
3. Impelled, when migrants retain some agency, such as when they flee or accept indentured servitude. Although the line between forced and impelled may blur, Petersen uses the example of German Jews. In the mid-1930s, anti-Semitic laws and actions strongly encouraged them to emigrate; this would be impelled migration, as opposed to the forced transport to camps that began in the late 1930s. Further, Petersen distinguishes émigrés, who may hope to return home, from refugees, who intend to settle permanently and may acculturate more rapidly. Again, the lines here may blur, as émigrés who once expected quick change in the political conditions of the country of origin realize that they had been mistaken.
4. Free. This is small-scale individual-level migration, generally by adventurers, the alienated, or pioneers.
5. Mass. Mass migration follows the pioneers, so that the principal motive for migrating becomes previous migration, or a social pattern that is no longer individual.

Other typologies have followed Petersen's. Zelinsky (1971) proposed regular patterns of mobility based on modernization theory. Tilly (1978) created a diagram in which the axes represented the distance traveled by migrants and the level of breakage of social ties. Local migration entailed the least distance and the least breakage of social ties. Tilly's other types of migration were circular, chain, and career, the latter involving the furthest distances and most need for new social ties. Historians have attacked the modernization paradigm but tried to elaborate and refine Tilly's initial formulation (Moch 1992; Lucassen and Lucassen 2005).

The key point about all these typologies is that they approach the conceptualization of migration at the micro level, and none except Fairbanks distinguishes international from internal migration. Arguably, Zelinsky even combines the two, with international migration being a manifestation of a late stage of development. But leading demographers associated internal migration with urbanization and considered the processes and data for studying urbanization to be so obviously distinct from those of international migration as to be scarcely worth elaborating (e.g. Shryock et al. 1976; Davis 1988). Yet at roughly the same time, economists were explaining both internal and international migration through macro- and micro-level neoclassical equilibrium theories on geographic variation in the supply of and demand for labor (Sjaastad 1962; Harris and Todaro 1970; Todaro and Maruszko 1987; Borjas 1989; Kivisto and Faist 2010). The potential for cross-over of internal migration theorizing was clear. In fact, Brinley Thomas' classic study (1954) on migration on both sides

of the Atlantic showed the interrelationship of economic growth, international migration, internal migration and social mobility. But Thomas' long shadows did not extend to changing the theorizing about the connection between internal and international migration.

Why did this cross-fertilization not occur? While disciplinary boundaries surely account for some of the continuing separation, Castles (2010) gives other reasons related to how research is conducted. Migration studies in less developed countries often start with poverty research, which has few links to other areas of migration research. Research on migration is often connected to area studies that have few links to disciplinary social science. Research on forced migration has led to specialization isolated from other areas.

Furthermore, the context of the debate may matter. Starting in the 1960s and continuing for a generation came calls for a general theory of migration, or just better migration theory in general. Conferences, special issues of migration journals, and whole books covered the topic, culminating in a multidisciplinary volume of commanding scope (Massey et al. 1998) that led to four principal schools: a neoclassical cost-benefit analysis, "new economics" focusing on relative deprivation and household-based strategies to minimize economic risk; world-systems, and social networks (Portes 2010).

While this theoretical debate was still young, when political scientists were newly discovering migration studies and the Iron Curtain was clearly limiting migration across Europe, one particular conference focused in part whether linkages to internal migration could help with the formulation of a common body of theory on international migration (Kritz et al. 1981). No consensus emerged. On one side, Pryor (1981) called for more interdisciplinary work and laid out areas where theoretical connectivity would appear most fruitful, in the selectivity of migration, causal factors for migration, patterns of migration flows, and policy. Reinforcing this argument was a call (Salt 1981) for modeling of a matrix of movement between groups of European countries in a way that had been done previously for internal migrants. At the macro level of world-systems theory, Petras (1981) argued that migration needed to be considered on a world scale, with a hierarchical system of production and international division of labor, not simply a national one. On the other side, Böhning (1981: 35) and Zolberg (1981: 4–6) defended the importance of national boundaries. Böhning held that in international migration, the state served a critical gate-keeping role, because a migrant "will be shown the door unless nonutilized or underutilized land or capital articulates a demand for his labor and the political power structure sanctions it." Likewise, Zolberg accused both macro- and microanalytic theorists of underestimating barriers to exit or entry and the latter of seeing recruitment efforts or forced departures "as mere error factors which mar otherwise elegant, value-free equations." He advocated for a political perspective, which could provide a foundation for differentiating international migration from the migration that predated the establishment of nation-states or that was strictly domestic. He defended the political approach as macroanalytical and therefore historical, concerned with important questions of changing membership, and reflective of international migration as a form of deviance from a worldwide norm of social organization.

Years later, even after migration within Europe had become much freer, Cohen (1995: 5) called for maintaining the theoretical division between internal and international migration because of the efforts, however imperfect, that states make to control borders:

> Without firmly grasping the importance of this political intervention into the international migrant market, one loses such important issues as the analysis of xenophobia and racism, the selectivity of certain migration channels, the determining influence of international migration on ethnic relations in the receiving country and the switch in destinations as one outlet for a migration stream closes or another opens up. In other words one is in danger of losing the *meaning* of migration by providing only a desiccated statistical profile of migratory movements.

But Cohen also saw other important theoretical cleavages in migration studies: forced vs. free,

settler vs. labor migration, temporary vs. permanent, illegal vs. legal, and planned vs. flight. He likened these to the ideal types envisioned by the social theorist Max Weber, not to strict categories.

Bridging the Gap Between Internal and International Migration

As has become much clearer in the last two decades, the rise of world-systems theory represented a challenge to the strict theoretical separation of internal and international migration. World-systems theory conceptualized the world in regions – a core, periphery and semi-periphery. This conceptualization cast the nation-state in more relativistic terms, with many implications for migrants and their identities and the diasporas and global media that connect communities (for an early summary, see Kearney 1995). In particular, a movement arose, especially in anthropology, to view international migrants as embedded in a process of "transnationalism" whereby they built and sustained social relations linking their countries of origin and settlement (Glick Schiller et al. 1995). As transnational movements matured, their cultural influence spread and institutions developed to sustain them (for recent reviews, see Levitt and Jaworsky 2007; Faist 2010). The point is elaborated further in the chapter in this volume by Caroline B. Brettell.

Building on the ideas of transnationalism, many new studies (e.g. Kivisto and Faist 2010; Wimmer and Glick Schiller 2002; Castles 2010) critique the view of the nation-state as a self-contained unit in which the major social relationships are embedded. Rather, they argue that migration studies in particular have fallen prey to what they call "methodological nationalism," or the idea dominant since World War II that the nation/state is the pre-eminent natural social and political unit. These new transnational studies further contend that many social scientists have ignored internal migration or linked it to urbanization while conceptualizing international migration, if not as an outright problem, then as an exception to the rule of people staying in the national societies to which they "belong." International migrants have been seen as antithetical to the national community of shared loyalty and perceived cultural homogeneity. Internal migrants would seem to be irrelevant.

Instead, these transnational works hold that internal migration is anything but irrelevant. Rather, internal migration is an alternative to international migration (Kivisto and Faist 2010), and thus the two types of migration are theoretically intertwined. Given the prevalence of short-distance migration, internal migration is clearly more commonplace. Only about 3 % of the world's population (or 214 million as of 2009) live outside the country of their birth (United Nations 2009). While internal migration is harder to measure worldwide, China and India alone have more than 400 million internal migrants (King et al. 2008) – or about twice as many internal migrants as the whole world has international migrants.

Many empirical studies in both developed and developing countries back up the argument that internal and international migration are alternative forms of movement. These studies show that the set of destinations considered by potential migrants is not limited to either internal or international locations, but often both, and may vary with economic cycles (Thomas 1954). Zohry (2005: 90) finds that Egyptians "migrate internally and externally without a logical order or a common pattern" and that both types of migration may be used simultaneously within the same household to avoid poverty. Similarly, Filipinos from the poor province of Ilocos Norte often choose between going to Manila and Honolulu (Arnold and Abad 1985; De Jong et al. 1985). Historically in England, the underemployed from Liverpool were as likely to migrate to Australia or to the United States as to the South East, where they felt stigmatized because of their accents and background (Salt and Kitching 1992). Mexican migrants in the 1950s and 1960s tended to go to the United States for temporary agricultural jobs or to Mexican cities for skilled or semi-skilled jobs; after that, urban-urban migration became

more common in Mexico, sometimes with a further international step to cities in the United States (Lozano-Ascencio et al. 1999; Fussell 2004).

Internal and international migration may serve as complements as well as alternatives. Migration may be a staged process, often involving an internal move either before or after an international move (Baines 1994; King and Skeldon 2010). Migrants may move from a rural area to an urban one, then to another metropolitan area in another country. They may then move to yet another city or return to their origin. In sub-Saharan Africa, for example, migration flows have proven dynamic, as traditional rural–urban migration has turned to one greater migration across Africa and to other continents, even as African cities have begun to attract global trade (Adepoju 2000; Bakewell and Jónsson 2011). Also, Mexican migration to the United States often displays these multiple kinds of migration steps (Lozano-Ascencio et al. 1999; Durand and Massey 2004). In one case, because the wage gap in rural parts of the Mexican states of Chiapas and Jalisco is greater than the wage gap between Jalisco and the United States, migrants from Chiapas go to Jalisco to replace the migrants going to the United States (Fitzgerald 2009). Mexicans migrants in the United States have for decades pressed on to new locations after crossing the border, and their arrival in new destinations accelerated sharply beginning in the 1990s (Portes and Bach 1985; Leach and Bean 2008; Lichter and Johnson 2009). Particular streams of Mexican migration have been encouraged and enabled by various institutions, such as coyotes and recruiters (Krissman 2005; Hernández-León 2008).

In the context of development, internal and international migration also remain closely interconnected (DeWind and Holdaway 2008). Internal migration can create a cycle by providing access to jobs and networks that permit later international migration, leading in turn to more job openings attractive to internal migrants. Should internal labor become scarce, the former sending country may become a migrant-receiving country, as in the case of Taiwan or South Korea (Skeldon 2008). At the same time, remittances may stimulate demand for more employment and more migration. Remittances may vary according to the wealth and social networks of the families involved (VanWey 2004; Piotrowski 2006). In Peru, the urban migrants tend to engage in reciprocal exchanges with their rural families of foodstuffs for processed goods, while the international migrants were more likely to send greater levels of money as remittances (Long 2008). But the effect of them is the same, to minimize risk to the family.

A further theoretical connection between international and internal migration lies in the receiving country, in the highly contested question of linkages between immigration and *natives'* internal migration. If unskilled immigrants and natives were substitutes for each other in the labor market, internal migration would rise when immigration waned, and immigration would rise when native labor was short. If they were complements to one another, the additional workers would expand consumer demand and create more jobs. But U.S. researchers have obtained mixed results when they have examined internal native migration as a mechanism by which immigration shows relatively little effect on the wages of native workers at the local level (e.g. Borjas 1994; Card and DiNardo 2000; Kritz and Gurak 2001; White and Imai 1994; Wright et al. 1997; for a summary of these arguments, see Ellis 2012). Other research has questioned whether native out-migration from states like California might reflect growing balkanization or avoidance of foreigners or high housing prices (Frey 1996; Withers et al. 2008), or whether in fact immigration to nonmetropolitan areas may follow prior native out-migration from those places (Donato et al. 2008). The relevance of this immigration-native migration linkage for understanding the economic effects of migration is so clear-cut and so widely researched, in fact, that viewed in this context, it becomes hard to understand why international and internal migration have been portrayed as distinct phenomena.

Beyond the effects of transnationalism, the spatial distinction between internal and international migration was predicated on the rule of thumb that internal migration took place over

relatively short distances and was easy to accomplish and that international migration was relatively longer and harder, with greater barriers. But in the case of migration, the exceptions represent such large and important contemporary migration streams that they seriously call into question the rule. First is the question of distance involved in each type of migration. Internal migration in the world's three most populous countries – China, India, and the United States – can involve moves of thousands of miles. International migration in many parts of the world, and certainly within Western Europe, need not cover nearly so much distance as moving from New York to Los Angeles. Because of the scope of rural-to-urban migration in China, the number and importance of long-distance internal migrants should not be underestimated. Second, the barriers to international migration vary considerably by country, so that it is often physically no harder than internal migration. In some parts of the world, barriers are minimal. The Schengen Agreement of 1985 paved the way for the elimination of internal border controls in Europe and now covers 25 countries. In parts of sub-Saharan Africa, migration across many national boundaries is fluid, often within a culture of mobility among traders (Bakewell and Jónsson 2011). At the other extreme, entry and even exit may be strictly controlled, with North Korea as a prominent contemporary example of tight control. Third, *internal* barriers to migration vary considerably. While most countries permit free movement within their borders, China has controlled the internal movement of its people since 1958. In particular, peasants are tied to their rural status through a permanent household registration system. Yet as China has industrialized, 150 million of those rural people have moved long-distance as a "floating population" to work in cities without hope of receiving the entitlements of authorized urban status (Liang and White 1996; Chan 2010). To put that migration in perspective, those migrants represent more than 11 % of the total Chinese population, or roughly three times the proportion of the U.S. population that consists of unauthorized immigrants. Although the Chinese example is the largest case of controlled internal migration, it is not the only case of an unindentured populace being tied to a place. For example, English and colonial American Poor Laws in the seventeenth and eighteenth centuries functioned much the same way. The poor were entitled to relief only from the parish to which they "belonged." If they became vagabonds and sought aid from a different parish, they could be cast out of that parish (Schoolfield 2006; Feldman 2007). Last, migrants' wealth or individual skills lower the barriers to migration. Many countries will accommodate investors or foreign workers whose skills are in short supply, so that they find international migration much easier than the poor or unskilled. For all these reasons, the assumptions governing the traditional division of international and internal migration are being questioned.

Emphasis on a Different Cleavage

If micro-analytic migration theory and the burgeoning studies of development and migration suggest that internal and international migration are more conceptually linked than ever, how can that linkage be reconciled with the undeniable need to consider the role of the state in migration? One response is to consider which cleavage in migration studies is the most important at a given time. Perhaps the cleavage between internal and international migration, which is a question of the exercise of sovereignty over borders, has diminished in importance as another cleavage has grown. That new cleavage would be between unauthorized or authorized migration, or more broadly, between belonging and not belonging.

Political scientists have broadly debated whether the modern state can actually control the number of immigrants it receives, either by encouraging high-skilled migration or discouraging too much low-skilled migration (e.g. Freeman 1994, 2004; Sassen 1999; Joppke 1999a; Guiraudon and Joppke 2001; Hollifield et al. 2014). Zolberg (1999) holds down one end of the argument by providing numerous

historical examples, such as U.S. immigration quotas in the 1920s, that show liberal states' effectiveness at controlling immigration and arguing that states may choose to permit porous borders. By contrast, Cornelius and Tsuda (2004) highlight the gaps between immigration policies and their outcomes. The very breadth of opinion on the debate suggests that certainly now, the great variation in border controls negates the existence of a universal difference between internal and international migration. Rather, the variation in the gap between policy and its effect has in itself become an outcome to be explained (Hollifield and Wong 2015).

On the other hand, policy decisions by states "perfectly define" the level of rights enjoyed by various classes of immigrants (Cornelius and Rosenblum 2005: 112). Policies classify migrants as not just as legal or unauthorized, but more broadly as citizens, denizens (permanent residents), or aliens. However, the policies themselves often are contradictory and confusing, leaving some migrants in a liminal status that affects most aspects of their lives (Menjívar 2006). Chauvin and Garcés-Mascareñas 2012: 242) argue that "the distinction between citizen and noncitizen is not a dichotomous one, but rests on a continuous and reversible gradation often connected with ethnoracial and ethnonational hierarchies." But even though this cleavage is not always clear-cut, it may be more salient for migrants than whether their migration is internal or international.

The most inclusive level of belonging is citizenship. Citizenship is fundamental to the creation of boundaries and inclusion in liberal democracies; it comprises multiple dimensions, not just a legal status, but rights, participation, and a sense of belonging (Bloemraad et al. 2008; Kivisto and Faist 2010). But even the nature of citizenship has changed. With globalization has come a new set of international rights for migrants and the increasing availability in the last few decades of dual citizenship (Kivisto and Faist 2010; Faist 2010). This trends call into question old assumptions about the indivisibility of citizenship and loyalty to one sovereign state and the state's right to monopolize the allegiance of citizens. International treaties on human rights and international courts give migrants some rights beyond those conferred by individual states, and sending states are increasingly reaching out to their emigrants (Fitzgerald 2009). For example, India reaches out to its diaspora by making investment easier and by offering cards to Persons of Indian Origin and a category of overseas citizenship, granting rights similar to citizenship with the exception of voting, government employment, or running for elective office (Naujoks 2009). Many states have gradually, sometimes grudgingly, accepted dual citizenship for a variety of reasons: they no longer fear diplomatic repercussions; fewer states conscript their citizens for military service; the women's movement legitimized the passing of the mother's nationality as well as the father's; sending states sought to maintain ties with emigrants, and the end of colonialism led expatriates in former colonies to want to exercise right in both countries (Kivisto and Faist 2010). The growth in international institutions and dual citizenships again suggests that belonging may matter more for migration than actual border crossing.

Yet, for many migrants, both internal and international, citizenship may be less crucial than legal residence, which often provides many civil, social and economic rights (Brubaker 1989). In the late twentieth century in the United States and the European Union, activist courts gradually extended to noncitizens many protections that once pertained only to citizens (Joppke 1999b). Such extensions of rights are not universal or linear, however. Legislatures have been more restrictive, as in the case of U.S. welfare reform laws that restricted access to benefits by noncitizens as of 1996. Within categories of legal residents, permanent residents have the most opportunities, because they do not need special permission to work. Unemployment does not jeopardize their right to be in a country. In Europe, the chief divide in access to social services and the labor market lies between permanent residents or residents from common market states and those who are not (Brubaker 1989).

Moreover, the meanings of belonging and citizenship have changed in recent decades in ways

that deepen the cleavage between the legal and unauthorized migration. The *hukou* system in China did not exist before the 1950s, although it was rooted in a Soviet practice, known as *propiska*, of requiring permission to live in any particular place (Pipko and Pucciarelli 1985; Chan 2009). The concept of clandestine or illegal migration was relatively unknown in Europe before the 1930s, because the legal and social trappings that created such a category were not in place. Before then, commentaries referred to undesired or unwanted aliens (Düvall 2008). Only beginning in the 1970s did the term come into more widespread use in Europe. The term "illegal immigration" came into play earlier in the United States, to describe Chinese and Japanese crossing the border from Mexico (e.g. Fry 1928), and it was used to describe the mass deportations of Operation Wetback in 1954 (e.g. Hadley 1956). But both policies and popular discourse about immigration, the unauthorized in particular, grew much more polarizing and restrictive by the end of the century (Chavez 2008; Chauvin and Garcés-Mascareñas 2012; Massey 2013). Although 9/11 brought more attention to actual border security (Tirman 2004, but see Boswell 2007 for a dissenting view on Europe), the question of membership has grown increasingly salient for immigration. In particular, because the undocumented generally lack many of the rights associated with membership in liberal states, their incomes are lower, their livelihoods more precarious, and their disadvantages pass on to the next generation (Menjívar 2006; Passel and Cohn 2009; Bean et al. 2011, 2015; Yoshikawa 2011; Greenman and Hall 2013; Massey and Gentsch 2014).

If we envision the critical cleavage in migration as one of belonging vs. not belonging, it also opens up more questions to research. All migrants have to adapt to new circumstances and make new social ties. In some countries, internal migrants as well as international ones can be unauthorized, as in the Chinese case. Internal migrants can face enormous cultural barriers and discrimination – often worse than that faced by immigrant groups -- as in the case of the blacks in the Great Migration (Massey and Denton 1993). Internal migrants in a pluralistic country may face linguistic, socioeconomic, and religious barriers, and regions of a country may vary widely in their willingness to welcome foreigners and offer welfare benefits (Van Hook et al. 2006). Thus far, the incorporation literature has focused so much on immigrants that it may overlook questions that equally pertain to internal migrants, although recent multidisciplinary data-collection projects such as the one in the Nang Rong District of Thailand permit novel insights into internal migration (e.g. Korinek et al. 2005; Garip 2008). Ellis (2012) suggests labor-market analysis as a starting place for applying commonly asked questions about restructuring and the division of labor to internal migration as well as immigration. By the same logic, if we view internal and international migration as conceptually linked, more cross-fertilized microanalytic research on migration becomes possible, particularly because of the availability of data sets, such as the Mexican Migration Project and the Mexican Family Life Survey, that focus on migrants across national borders (e.g. Fussell and Massey 2004; Rubalcava et al. 2008).

None of this is meant to underestimate the role of the state in regulating migration. For all the similarities between internal and international migration, they are obviously not the same. But the exercise of state sovereignty over borders is contingent on public policies that also affect the degree of membership granted to migrants (Brown and Bean 2014; Bean et al. 2015). Moreover, transnational studies have made clear that migration operates at other levels than merely the state. For these reasons, the old schism between internal and international migration appears to be breaking down and offering more ways of thinking about new kinds of migration and its consequences.

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Part II

Data and Methods for Migration Study

Concepts, Definitions and Data Collection Approaches

7

Richard E. Bilsborrow

Introduction

As fertility declines, migration is coming to be the major demographic factor accounting for changes in population distribution, both within countries (internal migration) and sometimes even across countries (international migration). In terms of within countries, as fertility rates become lower and more uniformly low in most countries of the world, including most developing countries (outside Sub-Saharan Africa), differences in fertility rates across administrative areas such as provinces and districts must become small, so that it is increasingly population movements, linked to the changing fortunes of places, that have the dominant effects on changes in population distribution rather than differences in natural population growth across administrative areas. Even across countries, *differences* in fertility rates are inevitably declining, while differences in international migration rates across countries continue to be large, and even rising to the degree emigration and immigration concentrate in fewer countries.[1] Internal migration also has long been recognized as fundamentally linked to economic growth and development, and indeed is embodied in the well-known dual economy model of Lewis (1954) and Fei and Ranis (1976). At the same time, international migration is increasingly attracting far more attention than a decade or two ago from not only governments around the world but international agencies, non-government organizations, and scholars (see, e.g., Castles and Miller 1998; UN 2005, 2006, 2012; World Bank and Wodon 2003). The United Nations estimates that 3.2 % of the world population lives in a country different from that of their birth, up but only slightly from 2.9 % in 1960 (UN 2013). However, most of the increase has been in the past 20 years, with migrants coming mainly from a few dozen developing countries and arriving mainly to a much smaller number of developed countries. The main reason for the increased interest of organizations such as the World Bank is that remittance flows have increased so much, expected by the World Bank to be $581 billion globally in 2014, including $436 billion in transfers mostly from migrants in developed countries back to their households of origin in developing countries.[2] The latter now greatly exceeds that of ODA (Overseas Development Assistance) from all multilateral and bilateral

[1] White and Lindstrom (2005) cite the finding of Rees et al. (1996) that the range of rates of net migration for administrative units of the EU is triple the range of rates of natural increase.

[2] See press release of World Bank (April 11, 2014.) See also the chapter in this volume by J.E. Taylor and Michael Castelhano.

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_7

sources combined, and rivals that of total private fixed investment from all developed countries in developing countries. These flows of remittances are now viewed as a major factor in lowering poverty, facilitating investment by households, and stimulating economic growth, and, at the macro level, improving the balance of payments of recipient countries.

However, recent assessments of the state of existing data for both internal migration and international migration (and remittances) have noted major deficiencies. With respect to the latter, these deficiencies have been discussed in many international meetings since the 1990s by major international organizations including the United Nations Population Division and Statistical Office, the European Commission and EUROSTAT, the UN Economic Commission for Europe, the World Bank and the regional Inter-American, Asian and African Development Banks, the Organization for Economic Cooperation and Development (OECD), the International Monetary Fund, the International Labour Office, etc. (e.g., UN 1949, 1972, 1980, 1998, Forthcoming). Deficiencies in existing sources of data on the international movements of people were documented in Bilsborrow et al. (1997) and have improved little since. At the same time, data on internal migration and urbanization are collected in different countries using different definitions of urban and of migration, and are hence very difficult to compare across countries (UN 2009a; UN 2011; Bell et al. 2002; Bell and Muhidin 2009)—a situation which has persisted since the first major attempt to present comparable data on urbanization trends across countries (Goldstein and Sly 1975). The 2009 UN Human Development Report, focusing on mobility and its fundamental linkage to development, stated: "Unfortunately, migration data remain weak. It is much easier for policy makers to count the international movements of shoes and cell phones than of nurses and construction workers" (*op. cit.*, p. 28).

These deficiencies are due to several factors, beginning with different and inconsistent definitions across countries of both internal and international migration, and even within countries according to source of data (e.g., different government agencies, such as the definition of urban used by the US Census Bureau and the National Center for Health Statistics). This chapter thus first discusses this issue of definitions, and in section "Conceptual and definitional issues and Conundra" recommends a clear definition of "migration", to distinguish it from other forms of human mobility.

In the sections in this chapter, internal migration will generally be considered first, prior to international migration, though when possible both will be covered together. The Section "Common existing sources of data, limitations and prospects for making them more useful" briefly describes the major existing national sources of data on migration, internal and international, the continuing lack of adequate data, the limitations of the major sources of data, prospects for adding questions on migration to existing data sources, and the need for specialized surveys, particularly to understand the determinants or consequences of migration. The Section "Aspects of survey design for specialized surveys of migration" describes how such surveys should be designed, and the need to consider "appropriate comparison groups". Section "Sampling in surveys of migration" deals with sample design for specialized migration surveys—viz., given the "rare elements" problem characteristic of migration surveys, how to design probability samples for efficient data collection. Alternative approaches to data collection are also adduced, along with a few examples of innovative survey approaches. Then section "Questionnaire content and design" confronts several key issues of questionnaire design and format for collecting data on migration from surveys. The Section "Some special methodological issues related to migration data collection" considers a number of exciting—largely unresolved or neglected—methodological issues in the field, followed by an attempt to draw together several broad conclusions in section "Conclusions".

Conceptual and Definitional Issues and Conundra

Definitions

> A migrant is not like a strawberry; we have to define it. (Andrea Salvini, ILO Regional Office for Arab States, Beirut, at MED-HIMS Meeting, Brussels, July 4, 2013)

In likely the most comprehensive graduate level demography textbook, it is stated that "the definition of a migrant is necessarily arbitrary" (Siegel and Swanson 2004 p. 495). This reflects recognition of the problems inherent in the concept even for accomplished scholars. It is no wonder then that the term is widely misused in the media and by other social scientists. Thus it is desirable to do better than this, to move forward as a profession towards common definitions and usage, if the measurement and understanding of migration is to advance, and for all to know at a glance what is being talked about. The first priority is thus to agree on a basic definition, and move on from there.

Thus *migration* is generally defined by demographers as spatial movement of a person which requires two things: (1) a *change in the place of usual residence*, which also involves (2) *crossing a recognized political/administrative border*. An internal migrant is then a person who moves from a residence in one state/province (first-level administrative division of the country) or from one district/municipality/county (second level administrative subdivision of the country[3]) across a border to live in another administrative area; an *international migrant* is movement to a new residence across a national boundary, from one country to another.[4]

It is crucial for the field of migration—if it is to advance as the field of fertility has in the past four decades or so since the World Fertility Survey initiated the Age of National Fertility Surveys across most of the globe—to first develop a consensus on what is meant by "migration." This will help guide data collection and produce more comparable data sets and research findings. This is the central theme of this chapter, and a key one of this book. This is by no means intended to deny that there are many other forms of human mobility, all of which have characterized and will continue to characterize human existence (e.g., Davis 1974; Castles and Miller 1998), and which have attracted the attention of scholars across the globe. We should not ignore these other forms of movement, or discount them.

The point is that it is crucial to clearly distinguish migration, as defined above, from the many other forms of human mobility which do not involve *both* a change of usual or customary residence and movement across a border. Thus there are a plethora of temporary types of movement which may involve crossing a recognized border, but only for a short time and *not to change one's place of residence*. Such *temporary movements or mobility* range over the whole range of human activities and interactions, from shopping, visiting someone, going to school or to a doctor's office or hospital, commuting to work, whether crossing a border or not, and whether the movement is for hours or days, daily or weekly commuting to work, temporarily changing a "residence" to take on temporary work, such as seasonal work of 1–3 months to plant or harvest a crop or work in construction. As another example, tourists usually move across internal or international borders, but that does not involve a change of residence. While the term "*temporary migration*" is widely used by demographers and other social scientists, this usage creates an inherent contradiction since it does not involve a "change in usual residence", only a change in temporary residence. The same illogical usage results from the term "seasonal migration". Is it too much to seek a universally consistent usage of "migration", and promote the use of

[3] Most countries use two levels of political or administrative subdivision to administer the country at sub-national levels, regardless of geographic size or population size, though a few use three levels, such as Indonesia (Provinces, Kabupaten, Kecamatan).

[4] See many standard textbooks in demography, notably Siegel and Swanson (2004, pp. 455ff, 463 and 493ff.). In addition, the United Nations Statistical Office has sought for years to promote common usage across countries (see UN 1949, 1972, 1998, UN Forthcoming).

"temporary mobility" and "seasonal mobility for work" as the usage of choice for these other forms of mobility, to avoid misuse of the term, migration?

Pursuing the concept further, migration involves the detachment of a person from a customary residence and various activities linked to that place of residence, such as the place of work, the school being attended by any children or adult in the household, the place for obtaining health care, places to shop for food and other items, markets to sell products (such as agricultural crops) or other home-produced goods and services, places of social interaction with friends and neighbors, recreational activities, etc., to move to another place of residence and associated activities in another location, across an administrative border. This attributes to migration a functional content or meaning, as well; but it is still the two-dimensional definition that is the key.

Further Observations

While migration always involves a spatial dimension—viz., crossing a politically recognized border—such a change does not always require a change in functional relationships, since moving across a border may mean only moving across the street, or a few meters, so the persons involved need not change their places of work, shopping, social interaction, etc. Nevertheless, by moving across a political border, they are under the *legal* jurisdiction of another, different (local) government, which involves *some* mandated changes in access to government services, such as water, sanitation, public schools that can be attended at no cost, access to security and fire personnel, the places to vote and to register births and deaths, etc., as well as tax obligations and where to pay taxes and fees.

Further considerations regarding the definition of migration:

1. By now, it is clear that not all movers are migrants. Indeed, the vast majority are not. *Mobility* is thus recommended as a more general term to cover all geographic movement of any distance (even moving next door), and for any duration of time, including movement that is temporary. See also the discussion of "typologies of migrants" at the end of this section below.
2. The use of the term "permanent," as in "permanent migration" as a synonym for "long term migration" that satisfies the two definitional requirements above, should be strictly eschewed. Nothing is necessarily "permanent" about migration (unlike death and taxes), as those who migrate once have been found repeatedly more likely to migrate again.
3. *Migration intentions* are implicit in the definition of migration, since those moving across a border with the *intention* of changing their residence should be considered migrants, even if they just moved yesterday. But if members of a household moved all their possessions across a border *with the intention of not staying* to live there at least some accepted minimum time (such as 6 or 12 months, which are two time periods commonly used), then this would need to be considered temporary movement, not migration. In the case of international migration, some governments (including the United Kingdom) ask passengers arriving at border crossings, airports, etc., whether they *intend* to stay or not, to classify international arrivals. However, people's intentions are fickle and often change, so that as a rule, intentions should not be relied upon to classify migrants (but see below, in connection with time cut-offs). Indeed, in the UK, the key requirement for arrivers who intend to stay is to have a visa or residence permit. Those who do not but say they intend to stay cannot solely on that basis be classified as immigrants; far more common are those who arrive denying having any intention to stay even as they plan to stay, illegally, by overstaying their visa.
4. As noted above, another term, *long-term migrants*, is commonly used to refer to persons who arrive in a state or county

(or country, for international migrants) during a year with a length of stay of more than 1 year (though some countries use 6 months as the cut-off). A time cut-off is commonly used to differentiate people who are migrants changing their residence for at least some minimum time from those engaged in temporary mobility—tourists, visitors, shoppers, commuters, etc.—crossing internal or international boundaries but for other purposes other than changing their residence and/or for a short duration. However, using any cut-off without taking into account intentions can lead to undercounting migrants, as explained below.

5. Note the simple definition of migration based on only two aspects does not involve any minimum time cut-off. Nevertheless, the European Union has come to require that people have to live in a new country for at least 12 months to be considered an "international migrant" (European Union 2007); but this leads to undercounting international migrants: Persons who crossed a border to enter a country to live there *within* the previous 12 months are not considered migrants. At least, such persons (directly or through their proxy respondent) should be asked whether their *intention* is to change their residence to the new country, and if so, and they meet other requirements, then they could certainly be considered immigrants. Otherwise, migration (immigration) is undercounted.
6. What about *nomads*? These are persons without a fixed residence, sometimes referred to as "permanent migrants", since they constantly change their residence and locus of activities depending on rainfall conditions, etc. Therefore, they should not be considered "migrants" according to the definitional criteria here, because of the lack of a permanent residence, even though they may cross internal or international borders.
7. *De facto* vs. *de jure* residence? This arises in the case of persons who have a legal or *de jure* residence which differs from where they usually live. If they move from a *de jure* residence to another location (crossing a border), are they "migrants"? The answer is yes, and this is indeed the case for the huge "floating population" in China.[5]
8. *Confusion over who is a member of the household vs. an out-migrant*. It is not uncommon for households to consider someone who has left to live elsewhere, even many years ago, as still a member of the household and hence not an out-migrant. This is especially the case in developing countries where it is the *de jure* head of the household, perhaps the legal owner of the house structure and/or farmland, who has left to live and work somewhere else. This is sometimes out of respect, or deference to this person as still being the "head" (reluctance of the wife to declare herself as the head, though she is *de facto*). This reluctance affected the design of the key first module of the questionnaire used in the 2013 Egypt MED-HIMS international migration survey, which began by inquiring about the members of the household, then later asking if any member had ever left and was not currently sleeping and eating there at the time of the

[5] The peculiar case of China is noteworthy here. Thus for decades under Chairman Mao, the government used the Hukou system (tying access to a residence, employment, free schooling, subsidized rice, etc.), to control the place of residence of the population and hence limit migration. Even with the "opening" of the economy to capitalism under Deng Tsao-ping in the 1980s, the Hukou system continued, but was overwhelmed by the approximately 250 million people reported to have moved from rural to urban areas for employment in the past three decades, perhaps the largest migration in such a time period in human history. Vast numbers of this "floating population" continue to maintain their legal residence and Hukou in their village, where often a parent continues to live and keep the plots of land and raise the grandchild (child of the migrant). The grandparent often refers to the migrant as a continuing member of the household, and therefore a non-migrant. But in fact, that person, who may have lived away in a city for decades or has just left days ago, has in essence changed his/her place of residence, and is therefore definitely a migrant, using the recommended dual criteria. While some migrants may not have originally *intended* to move long-term to the city, they did so, *de facto*.

survey (CAPMAS 2013).[6] While sometimes it is expected or hoped that the absent member will return, or has returned before, even when the person has been living away (albeit visiting occasionally) for decades, he/she may well still be reported initially as a member of the household by whoever is responding to the interviewer.

9. A form of internal migration of particular interest is *rural–urban migration*, the measurement of which requires establishing a definition of urban space, with the balance considered rural. As explained in the appendices of the bi-annual volumes of the UN Population Division (e.g., UN 2012), the countries of the world use four different and non-comparable definitions of urban, based on population size (and different cut-offs are used, e.g., 2,000 or 10,000); classification of areas as urban, even if mainly rural; administrative function, such as whether is the capital of an administrative area; or based on "urban" characteristics (such as having two-story buildings, paved roads, electricity, water pipes, etc.).
10. The terms *emigration* and *immigration* are commonly misused not only in the media but in academic spaces as well, where they are used to refer to not only international migration (as is correct) but also to internal migration, with immigration used for in-migration and emigration for out-migration.

A complication of the field of migration is that every migrant is both an in-migrant and an out-migrant! This is not possible in studying fertility and mortality! Thus someone leaving a district of residence A to move to another district B is an out-migrant from A and an in-migrant in B. Similarly, a person emigrating from Tunisia to France is considered an emigrant by Tunisia and an immigrant by France. So one needs to be clear about one's perspective—origin or destination country (or area). Other associated terms used in the literature are *place of origin* and *place of destination* (which refer broadly to internal as well as international migration), and country of origin (or sending country) and country of destination (or receiving country). While changing the place of residence changes one's legal status and may alter access to public services and facilities, when this occurs in an international space, the effects are usually far more transcendental, since the person passes from the sovereignty and protection of one state or nation to that of another. If the international migrant is a *citizen* in the country of origin but not the country of destination—the usual case with migration from a developing to a developed country (referred to as South–North migration)--then the person, as a non-citizen in the destination country, is no longer under the protection of the State of residence and may have few legal rights.

Thus, *citizenship* is a particularly important concept in international migration. In the usual usage, international migration comprises legal immigrants/emigrants, illegal (a more acceptable term is "undocumented") immigrants, refugees, and asylum seekers. A *refugee* is a person "living outside his or her country of nationality who is unable or unwilling to return to that country because of persecution or a well-founded fear of persecution, based on race, religion, nationality, membership in a particular social group, or public opinion" (United Nations Convention on Refugees, 1950). This is to be distinguished from an *asylum seeker* who is a person applying for refugee status but whose application has not yet been ruled upon. The determination of whether someone is accepted as a refugee requires a decision of the country of destination, often called the host country, which has sovereign rights over its territory and can rule on who is allowed to enter. A country may ask for—and many do—assistance from the United Nations High Commissioner for Refugees (UNHCR) in making this decision, although the main function of UNHCR is to provide food and shelter on a temporary basis to persons accepted by the host country as refugees. Once a person is recognized as a refugee, he/she is entitled to the protection of the host country state, as well as to receive food

[6] This situation is commonly confronted by interviewers: E.g., an editor of this volume reports this to be the case in the new Demographic Surveillance Systems in Africa (White 2014).

and other aid on a temporary basis from UNHCR and occasionally also the host country government, and to seek employment. UNHCR may also on humanitarian grounds provide food, tents, etc., to those fleeing their country of origin even before such a ruling (see www.unhcr.org). However, persons fleeing to a country and seeking asylum (applying for refugee status) are in limbo and referred to as asylum seekers, and not entitled to assistance (nor to legal employment) while their status is being determined by the host country government.

Questions to Identify Migrants

To identify *internal migrants* in population censuses or surveys, several different types of questions are possible. For example, to identify in-migrants, one can ask:

(1) Where were you born?
(2) Have you moved to this location from a different county/district (in the past x years)?
(3) Did you live in the same house on March 1 last year?
(if no) Where did you live?

For (1), this identifies the person as a *lifetime migrant* if the administrative area of the place of birth is different from the current place of interview/residence. But such data are of limited use since it is not known when the migrant moved, nor if there were any intermediate moves, nor recent moves, nor when the last move occurred. In fact, a person living in the same area where he/she was born appears in such data as a non-(lifetime) migrant, even though he/she may have moved many times since birth, but was living in the place or area of birth at the time of interview.

For (2), the question identifies if the person moved across a boundary within a fixed time interval of x years, and identifies what is referred to as a "fixed term migrant", though a more appropriate term would be "fixed time migrant".[7] If x is 1 or 2, this identifies very recent migrants, while if x is 10, it includes many migrants who moved not so recently. To attain a happy medium, $x = 5$ has come to be commonly used, in both household surveys and population censuses. When censuses are 10 years apart, the 5 year question helps provide an approximation of the mid-term, intercensal population, and captures more persons as migrants, which alleviates somewhat the "rare elements problem" common in household surveys of migration (see Bilsborrow et al. 1984, and section "Sampling in surveys of migration" below). On the other hand, it leads to two other issues: (a) imprecision about when the migration occurred; (b) for many migrants, the migration will have occurred enough years ago that the details of the circumstances surrounding the migration may not be recalled well; and (c) some migrants will have had more than one move to the interviewed household (he/she could have come within the interval, left, and returned), so there may be confusion about which migration to report on. (a) can be addressed by adding a simple follow-up question, "When did you come to this area?" (c) can be addressed by adding the word "last" in parentheses before "come" in the preceding sentence, and training interviewers to make it clear that it is the *last* time the person moved to this place that is the migration move of interest. This is in fact often desired, to focus on the most *recent* migrants, for two reasons. One is that it is possible to collect more detailed, more accurate data (better for research) for more recent events, and second, this is generally of more relevance to policy-makers who are most interested in recent migration.

Question (3) is the question used in the U.S. Current Population Survey for many years, asked every March, to identify persons moving in the previous 12 months (to obtain data on 1 year fixed-term migration). It identifies all persons changing their place of residence, but it requires the second question as well to identify which

[7] The UN (2008) also recommends obtaining duration of residence, especially for internal migration, plus place of previous residence. This indeed provides more complete data, but is more complex to tabulate and interpret, and does not provide a population estimate for any specific year in the past.

persons who moved from a different administrative area (migrants) and which did not (movers). Over the past 50 years, the proportion of the US population moving in a year and the proportion migrating have both declined, though the mean distance traveled by those moving has increased. Although (3) involves asking two questions while (2) has only one, the questions in (3) are simpler since they do not require the respondent to take into account in one question *both* whether the person moved and whether the move involved crossing an administrative border, both of which must be conceptualized by the respondent simultaneously in (2). Because of this greater simplicity, (3) is more appropriate for a census or large-scale survey that does not focus on migration (such as the US Current Population Survey).[8]

Adding a question on *when* the migrant arrived fixes the time of arrival, and therefore makes possible estimating migration *flows and rates*, and determining some basic characteristics of migrants (those surviving since migration) by time of arrival. It also makes possible identifying *recent* internal/international migrants, which are of special importance to policy makers (if not also to most researchers) compared to migrants who came some years earlier. Characteristics of migrants and their households can be compared with those of non-migrants and their households on various dimensions, depending on other data collected in the survey. Thus the addition of a question on time of arrival greatly enhances the value of the census or survey as a source of data on recent migrants, and for collecting data to compare/contrast migrants and non-migrants.

The discussion above pertains to questions to identify in-migrants. To obtain information on out-migrants is more difficult and has been far less often attempted (see Bilsborrow et al. 1984), as normally the data have to be provided not by the migrant but by someone else, the *proxy respondent*, who is a person remaining in the household the migrant left from.[9] The usual questions are:

(4) Has any person who was a member of this household ever moved away to live in another district/county?
(5) In the last (x) years, has a member of this household moved away to live in another district/county (country)?

In either case, the subsequent follow-up questions are "who", and then "when" and "where to" (destination), followed, space permitting, by a mini-table to list the names and key characteristics of the persons, preferably at the time of departure, when possible. For international migration, the destination is "another country". Note that in (4) "moved away to live" satisfies the residence definition requirement, while "to another district/county or province/state" satisfies the boundary crossing requirement. It is important to not just ask about persons who moved away from the household, but to clarify whether it is outside the current district where the interview is taking place or not, since only the former qualifies as migration. So it is straight-forward: there is no required duration of residence away imposed via either question, nor is there a minimum time of being away before it is considered a change of residence.[10] Leaving for that purpose "yesterday" is in fact sufficient.

The evident advantage of (5) over (4) is that it fixes the out-migration (emigration, if international) in time, and in a recent time interval, which facilitates asking more detailed questions

[8] Nevertheless, censuses and surveys not focusing on migration nowadays often utilize questions of type (2) under the illusion that they are economizing on questions. This is a false economy, however, and all too common when people aim to collect as much data as possible with as few numbered questions as possible, and thereby fail to use initial, additional simple screening questions that ensure a facile flow of the interview, to the benefit of both the respondent and the interviewer.

[9] Exceptions occur when the survey interview can be conducted in places of origin when the migrants are themselves visiting their home communities. This is often the case at the time of the Spring Festival in China and other Asian countries, and at Christmas in many Western countries.

[10] Thus the European Union, after lengthy deliberations, adopted a definition of emigrant as someone who has been away in another country for at least 12 months (EU 2007).

about the person leaving, including why he/she left and factual questions about the circumstances of the person and the household at that time, which is necessary for the study of the determinants or consequences of migration. On the other hand, question (4) leads to data providing a more comprehensive picture of out-migration movements from the household from the past up to the time of interview. In most households, there will be only one person leaving, but sometimes two or three and very rarely four or more. In such situations, the best approach is to begin with (4) but follow with a question about the age of the person leaving at the time of departure, since it is mainly adults moving who are of interest since they are the decision-makers (e.g., age 18+ in developed countries, 15+ in developing countries). Knowing about other household members who previously left is useful for studying the departure of subsequent (more recent) household members. But evidently, question (4) involves more time to collect the data.

A final point is that to specifically study out-migration, both questions should have appended at the end, "*and not returned*". Without that, the data will provide data on *both* emigrants and return migrants, which then requires additional follow-up questions to separate the two; for example, the follow-up question is, "where does this person live now?", and if the response is either "in this household" or "in this community (or district)", then the person is considered a return migrant. Further appropriate questions to ask could include, "when did this person return? Why? What economic activity was he/she engaged in when he/she returned? What education level did he/she have?"

For those persons who are not return migrants, the answer to the question about where does X live now will be some other place (district, state, country), which will lead to a necessarily different set of follow-up questions about the current situation of that out-migrant, and possibly other questions about his/her status at the time of out-migration (education and school attendance, marital status, economic activity, reason for leaving), then about when the person left and the first destination, if different from the current residence, and a series of questions about current status in country of destination/current residence (viz., current marital status, education, economic activity, whether sending remittances back, and so on).

But no single census or household survey can collect data on entire households that have left. The reason is simple: there is no one in the household to provide reliable data on them. There have been attempts to ask neighbors, which especially in the case of very small, closely knit rural communities, can often provide some reliable basic information, such as who was in the household that left (names, age, sex), when they left (year, and perhaps month), and why they left, and where did they go (province and city, country). But it will be rare for neighbors in large towns and cities to be able to provide reliable data on even these basic things. In any case, there does not appear to have been a careful methodological study in any country on the reliability or not of data from neighbors or other family members in the community on out-migrants. In Egypt, a country with a long history of heavy emigration of male workers to the Gulf states, an interesting effort was made to collect such data in its most recent census of population: the "nearest" neighbor was asked by the census enumerator to provide data on the occupants and when they left in the event a house was found not occupied in the 2006 population census, carried out by the government census organization, the Central Agency for Public Mobilization and Statistics (CAPMAS). But there was no way to ensure that this was in fact done whenever a dwelling was found vacant; the "nearest" neighbor may not be easy to determine, and be subjective; and data on the same departed household could be obtained by more than one enumerator. As it turned out, the data collected was recognized to be a vast undercount of emigrants.

It is noteworthy that along with the great increase in interest of organizations such as the World Bank, IMF, and EU in international migration linked to the vast expansion of

remittances from the North to the South is a similar increase in interest of governments in developing countries in getting better data. Hence, the UN Statistical Office (UN Forthcoming) is now recommending (5) along with *sequelae* questions to collect basic data on emigrants.

In the case of international migration, there are three dimensions of interest in defining migrants, based on (a) place of birth (country) vs. place of residence; (b) citizenship; or (c) change of residence involving crossing a country border. (a) involves crossing a border at least once in one's lifetime, and is the most common source of data for identifying (classifying) the world's population as (net) "international migrants" or not, and provides the "stock of international migrants" estimates of the UN Population Division (232 million or 3.2 % of the world's population at last estimate—see UN.org.population *Wall Chart*, 2013). The reason for these data being highlighted by the UN is that many more countries collect data (in their population census) on place (including country) of birth than on citizenship (b) or on actual migration movements and time of move (c).

Typology Conundra

As noted above, a case could be made for using an entirely different approach to defining migration: one based on functionality rather than arbitrary government-defined administrative boundaries. Various functional definitions could be used, based on the degree of difference between places of residence before and after a change, based on criteria such as the physical distance between places or the time required for most people to get from one place to another, or differences in culture, religion, socio-economic characteristics, employment conditions, language, etc. This applies to both internal and international migration, but is best exemplified by international migration. Thus movements from Egypt to Jordan, Guatemala to Mexico or Ivory Coast to Senegal are less disruptive than from Egypt or Guatemala to the United States, Turkey to Germany, or Ivory Coast to France. In developing countries, rural–urban moves are generally much more disruptive of traditional lifestyles than rural-rural moves, and may involve "cultural shocks" akin to those of international migration. For some research purposes, a definition based on a cultural, ethnic or religious difference may be useful, but how to measure or quantify such a "distance" is complex, involves arbitrary choices about what aspects to include in the measure of "distance", and the aspects which are most salient will differ from one context to another, complicating comparisons from one context to another.

For internal migration, the use of the usual definition for defining internal migration works for individual countries, but there are grave problems in comparing data across countries. Thus countries which have smaller administrative areas (because the country is smaller, or because they officially use *more levels of subdivisions*, such as provinces, districts and sub-districts compared to using only provinces and districts) will tend to have higher migration flows since the same (distance) move is more likely to involve crossing a border in the former than in the latter. This is cogently illustrated in Long (1988) and White and Mueser (1988). This must be born in mind in data comparing internal migration proclivities across countries.

Finally, various attempts have been made to develop a way of classifying all types of moves, not only migration as defined above. Back in the hey-day of interest of scholars and policy-makers about internal migration and its linkages to development in developing countries—before international migration took center stage—Guy Standing (1984) reviewed many of the terms used in the field of migration, including spatial, residential, temporal, and activity (economic or otherwise) criteria—note only the first two are recommended here—as well as voluntary vs. involuntary migration, long-term or "permanent" migration, transilients, commuters, transfers, reversible vs. non-reversible migration,

as well as lifetime vs. fixed-period migrants, indices of circulation and velocity of migration, and stage migration vs. step migration. These terms have value for certain kinds of migrants and other movers, and follow previous attempts to develop a terminology that encompasses all kinds of movers and non-movers. After reviewing previous efforts, Standing proposed the following comprehensive typology (1984, p. 58):

1. Transilients, including nomads, hunter-gatherers, migratory laborers.
2. Sojourners, including circular migrants, seasonal migrants, commuters, life-cycle stage migrants.
3. Transfers (by employer).
4. Long-term migrants, including lifetime migrants, return migrants, step migrants.
5. Non-migrants, including potential migrants, those undecided, and those intending to never move.

Such a typology illustrates the difficulties of classifying the large variety of movers: How are commuters sojourners rather than a subset of non-migrants? Or life-cycle stage migrants other than a form of long-term migrants? Why not also include target migrants and fixed term migrants under long-term migrants? Why are migratory laborers under transilients if most have a home base? Why are (work) transfers a separate category, as that mixes whether it is voluntary or not (which can vary in degree) with space and time dimensions? Certainly different typologies can be adduced, to encompass virtually all moves, but human movements are so diverse it is likely a "will o'the wisp" to seek a small number of manageable, universally recognized terms to cover all possible moves. Nevertheless, such typologies are useful for ensuring we do not forget the rich diversity of human movements even as in this attempt to introduce clarity and discipline in defining "migrants," to differentiate them from non-migrants, including those engaged in other forms of human mobility.

Common Existing Sources of Data, Limitations and Prospects for Making them More Useful

Population Censuses and Continuous Population Registers

The main government sources of data for both internal and international migrants in the countries of the world are generally two, (1) the population census, and (2) the population register. (Surveys are discussed later.) Other sources of data exist for international migration, including admission/border statistics, data on visas allocated, residence and exit permits, registers of foreigners, work permit statistics, statistics on naturalizations (as in the United States) and regularizations of status of foreigners and visa over-stayers, and finally, of course, data on refugees and asylum seekers. However, none of these other sources provides complete national coverage (in principle!) of international migrants, so they are not discussed much here (all are discussed in Bilsborrow et al. 1997). A population register, if well-funded, staffed and managed (such as the Dutch register: see van den Brekel 1977), is the Gold Standard for much demographic and other data, since it can achieve near universal coverage of not only major demographic events (births, deaths, migrations) but also so many other lifetime events for each person "from cradle to grave". It is the only demographic data collection system that is fully "self-contained" in collecting and compiling data continuously on each of the three major demographic events but also on the population size of every locality and hence of the country and all its administrative units, permitting demographic rates to be compiled at any level of disaggregation, including migration rates. Thus in such a well-administered, decentralized system, persons/households wishing to move out of an area inform the local authorities there as well as those in the place they are moving to, so internal migration is recorded at the lowest administrative level and the data registered upward through

administrative channels. Immigration is recorded the same way at the local level, as is emigration, as those exiting are supposed to inform local authorities, so their exit is registered when they leave. The fact that the data are recorded continuously, as events occur, by presentation of the national identity card, means that migration and other rates can be compiled on an up-to-date basis, such as monthly, with no significant delay. Another special advantage of population registers in studying migration—rarely mentioned—is their collecting accurate data on the *dates* of many key events in a person's lifetime, facilitating determining the relationships between when migration occurs and when various other key lifetime events occur, such as starting/completing education, marriage/divorce, getting/ending a job, buying/selling a house, etc. While one does not want to succumb to the *post hoc ergo propter hoc* fallacy, it is well-known that migration is often related to such events, and in a register, many are already recorded with precise dates and no data recall problems as is common in, for example, censuses and surveys.

While over 50 countries have some sort of population register, almost all are developed countries and indeed most are in Europe. Few developing countries have well-functioning continuous population registers, and some use it to control the movement of people. Therefore the major global source of data at the national level on migration is the population census. For internal migration, the census can easily record the migration of individuals and households by asking questions such as (1)–(5) in section "Conceptual and definitional issues and Conundra" above. For example, questions (1) and (2) ([3] is a special case of [2]) yield data on lifetime and fixed-period in-migrants, respectively, covering both individuals and whole households moving to places of destination. Similarly, (4) and (5) provide data, through proxy respondents, on individuals' out-migration from the household, either over the lifetime (since both the household existed and the person existed as a member of it), or since some fixed time (x years ago) in the past. Whole households moving cannot be captured by censuses in a country (of origin), since there is no one left to (reliably—see case of Egypt above in section "Conceptual and definitional issues and Conundra") report on their moving, via questions such as (4)-(5). In a census, data on internal migration of *individuals* from origin to destination areas can be gathered from (2) and (5) and from (1) and (4) (adjusting for mortality), to compare the data and check on data quality and consistency, though this has rarely been done. If the census has good coverage, it would be particularly useful to do this as a methodological study to determine the reliability of proxy responses on individual out-migrants from (5) compared to data provided directly by the migrant. This is feasible for internal migrants, both individual and household migrants. But for *international* migrants, both individuals and whole households migrating, data are available directly from the migrant only in the place of *destination*—a key reason for undertaking household surveys in *both* countries of origin and destination (Bilsborrow et al. 1987, Ch. 6).

Population censuses and continuous population registers (where available) thus constitute the two principal official forms of national data collection on migration, and customarily provide basic data on the numbers of in-migrants and out-migrants for countries and all component administrative areas. Usually some additional data are obtained (in the population register and through follow-up questions in the census) about the migrants on their age, sex, date of arrival/departure, and possibly destination of out-migrants/emigrants and origin of in-migrants/immigrants (four items in each case). The population register will also have collected considerable additional data on a routine basis on out-migrants prior to their departure from an area, while both sources will have additional data on those arriving since they are present at the time of data collection (e.g., time of census). For those leaving, a census cannot go much beyond the four items noted, though some may ask about the reason for coming or for leaving and level of education (though making

the mistake of asking about the current level of education of out-migrants rather than the level at the time of leaving).

Despite the growing interest in migration, and recently especially in many countries re-international migration, there is a real danger of loading up a census with too many questions, such as detailson things like emigrants who left the household, which can make the census schedule too long, compromising other census responses, or without the necessary additional training of enumerators in administering the additional questions on migration. Moreover, putting the questions on migration at the very end of a relatively long census schedule is a recipe for poor data: In the case of the last (2004) population census of Morocco, this contributed to widespread non-response and serious undercounting of emigrants.[11]

The UN has developed recommendations for questions to include in population registers and population censuses for the collection of data on internal migration and international migration (UN 1949, 1972, 1980, 1998, 2008, Forthcoming). These documents recognize the value of questions to obtain lifetime and, better, fixed period migrants, but the limitations of population registers and censuses for collecting data on more than the numbers of migrants and a few basic characteristics must be clearly understood. Regarding in-migrants (internal) and immigrants, little needs to be said since they are routinely covered in enumerated households the same as other household members and in the same detail. This means that data are collected on the same *current* characteristics as for other current members of the household, but unless special, additional questions are added, nothing more will be known about them, such as when they came (or returned), where from, their situation (marital status, education, work status, etc.) at the time of arrival (which would be important to know if one desires, for example, to measure population change or movement of human capital due to migration).

The situation is more complex, however, in collecting data from censuses on out-migrants or emigrants: What should be collected? Note the data collected will usually have to be provided by another respondent in the household, a "proxy respondent", which requires attention to what data such a person can reasonably be expected to know about the out-migrant and how far back in time. Nevertheless, censuses of population should collect data on not only those who arrived but those who left, out-migrants and emigrants, and not only on the place/country of birth of the person but also the age/date of birth, sex, and, when of interest to the country and when feasible in terms of length of census schedule, on key indicators of their situation at the time of leaving, viz., education, work status and date of (last) departure. Useful but generally of less importance in general are marital status, relationship to the household head, and reason for leaving (due to its being not only non-factual and subjective, but second-hand subjective. Very important but much more complicated and expensive to both collect and process is information on employment/occupation. Education is not only easier to collect but also provides data on flows of human capital, as a first step to measure the so-called "brain gain" and "brain loss" (without judgement here, since assessing these terms is far more complex, but census data can and should provide this raw material). Note that these terms also apply to internal migration within countries, as it involves moving people with their embodied human capital often from (rural, poor) areas of low human capital endowments to areas of higher human capital stocks, just as international migration does between countries. Nevertheless, this is hardly ever discussed or analysed in contemporary developing countries, in contrast to debates about the effects of international migration on brain gains and losses.

In any case, registers and censuses can collect only basic data about migrants, not the full range of data needed to investigate either the determinants

[11] Personal discussions with officials of the Direction de la Statistique, March 23–27, 2013, and mentioned in Bilsborrow (2013).

or consequences of migration, nor is it practical for either system to collect the retrospective data needed on the situation of the migrant at the time of arriving or departing. To investigate either the determinants of consequences of migration, household surveys are needed. But before we consider issues in the design of *specialized* household surveys on migration, we briefly consider arguments often put forth for adding questions on migration to existing surveys.

Existing Household Surveys to Which Questions on Migration May Be Added (?)

Given the plethora of household surveys in many countries around the world, it has often been recommended to use existing surveys as a vehicle to add questions on migration. Adding questions to an existing survey has major cost advantages, as the *marginal cost* is minimal since the survey is already being administered and funded anyway. The additional costs are a bit more training time, a couple minutes at most added to the duration of interviews, and the small additional time needed for processing the data. This sub-section considers what is required for a household survey to be a good candidate for adding questions on migrants. This depends on three factors, the first two relating to sample size discussed immediately below, and the third relating to the content and length of the questionnaire used in the existing survey.

The Crucial Issues of Sample Size and Prevalence of Migrants

To determine whether it is worthwhile to piggyback questions on an existing survey to study migration, it is necessary to first ask two questions:

1. What is the size of the existing sample?
2. What is the prevalence of migrants (or households with migrants of interest) in the country?

The larger the sample size, and the higher the prevalence, the less severe is the "rare elements" problem characteristic of migrants, especially international migrants. Thus with a low proportion or prevalence of households with migrants of interest, the sample size required to provide an adequate number of migrants to study and compare with non-migrants will be large. And with a small sample, a high prevalence of migrants is required. If the responses to questions (1) and (2) indicate the survey is likely to collect data on sufficient migrants to be useful, two additional, supplementary questions are:

3. Does the existing survey already collect data on place of birth or place of previous residence (preferably both) to permit clearly identifying (internal, international, or both) migrants, without adding more questions?
4. Does the survey already contain questions on education, economic activity, or income?

Responses to (1) and (2) together indicate whether there is any point in pursuing the possibility of adding questions to the existing survey. It is assumed that (a) the main purpose of the existing survey will not be changed, so that the sample design also cannot be altered or a larger sample used; and (b) only a modest number of questions on migration can be added to the existing survey questionnaire.

To illustrate the problem of small samples, suppose we are studying international migration. It can be shown that most existing surveys have sample sizes that are too small to study international migrants. For example, suppose international migrants are defined in the most simple way as persons born outside the country in which they currently live at the time of the survey. This is the definition used by the United Nations Population Division since it yields comparable (if less than ideal) data on international migrants for the largest number of countries. Thus the share of the foreign-born in the global population is 3.2 % in 2013 (UN 2013)—10.8 % in the more developed regions and 1.6 % in the less developed regions. These data reflect the accumulation of migrants over many years, so the numbers and percentages migrating internationally in a short

time period, such as in the past 5 or 10 years, is far smaller. Very few countries ever have more than one per cent of their population departing in such a time interval to live abroad (short of mass fleeing major civil strife or natural disasters). Indeed, on a global scale, the mean annual net migration rate (net immigration) for *developed* countries in 2005–2010 was 2.2 per 1000, or less than one quarter of one per cent per year (UN 2006, 2009b; not available from 2013 source), while the mean annual net (emigration) rate for developing countries was −0.05 per 1000, or well less than one-tenth of one per cent per year. Thus in a 5 year period, few developed countries would have more than 2–3 % per cent of their population made up of recent immigrants, while few developing countries would ever have over one per cent leaving. This illustrates the rarity of households with *recent* migrants, who are commonly the ones of greatest interest to policy-makers as well as researchers.

For example, suppose we use a relatively high −0.4 % value for emigration in a single year (eight times the average) and a corresponding −2 % value for a 5 year period, and consider a typical household survey of 10,000 households with a mean household size of 4. This will yield only 160 persons emigrating in 1 year, which is rather small for meaningful analysis. The numbers rise to about 800 emigrants for *a 5 year reference period*, and 1600 if a generous 10-year cut-off is used. Now suppose that half the emigrants leave the developing country of origin as *whole households*, and the other half as individuals. Then, with 1-, 5- and 10-year reference periods, the number of households emigrating as entire households (and not possible to interview in the developing country of origin since they are gone) is 20, 100 and 200, respectively, while individuals emigrating would be 80, 400 and 800. If for simplification it is assumed that individuals emigrate one per household, the latter figures indicate the number of households that would report having a recent emigrant (out of the 10,000 households). Then with a 5-year time cut-off, the survey would have 9,600 households with no emigrant ("non-migrant household") compared to only 400 households with an emigrant of interest. These figures illustrate clearly the problem posed by modest sample sizes, the so called "rare elements" problem of migration surveys. It also illustrates the trade-off involved in extending the reference period (e.g., from 5 to 10 years), which yields more households with emigrants, but dates of emigration farther back in time, which is not only of less policy interest but presents more problems of data quality due to increasing memory error (Som 1973). As we will see in section "Sampling in surveys of migration" below, to deal with "rare elements", specialized sampling methods are desirable.

Compared to international migration, internal migration is far more common, with globally 5–10 times as many persons migrating within their country as across international borders, e.g., according to the global surveys of the Gallup Poll reported in the Migration Policy Institute).[12] This means the "rare elements" problem is not as severe as with international migrants, but the problem still exists when one is collecting data to study recent internal migration (see Bilsborrow et al. 1984).

Major Existing Types of Household Surveys that Could Provide Data on Migrants if Modified

Several genre of household surveys may be considered candidates for adding questions on migration. Some may have sample sizes sufficiently large to yield sufficient numbers of internal and/or international migrants for meaningful analysis, though this always depends also on the prevalence of migrants in the country. The potential for using existing types of household surveys as vehicles for adding migration questions is briefly assessed here, for labor force surveys, Demographic and Health surveys, LSMS and

[12] The MPI reported, based on surveys in 2011–2012, that 381 million persons moved in the previous five years within their country, including 196 million women and 185 million men (September 23, 2013). This is over 5 % of the world population, but includes *all* changes of residence including those not involving crossing a recognized administrative border. See also Bell and Muhidin (2009).

household budget surveys, and multi-purpose surveys, focusing on developing countries.

1. Labor force surveys

The International Labor Office sends out annual questionnaires to the countries of the world seeking data on employment and unemployment. Almost two thirds of the 191 countries receiving the questionnaire provide actual and meta data based on national labor force surveys, though these surveys are not always recent nor carried out annually.[13] Nevertheless, these surveys are almost always carried out by the national statistics office, have a relatively large sample size and national coverage, and focus on data on employment and unemployment. Their sample size and focus on employment—central to migration—make them top candidates for adding questions on internal or international migration. A third advantage is that the questionnaires are usually not very long, so it is not an unreasonable burden on respondents to have a few additional questions to answer (i.e., without risk of respondent fatigue). Thus questions could be added without altering the main purpose of the survey or its sample design.

A few years ago, the International Labor Office developed experimental modules of 20+ questions on international migration that in 2006–2007 were added to a round of the quarterly labor force surveys in four developing countries, producing useful data—Armenia, Thailand, Egypt, and Ecuador (for details, see Bilsborrow et al. 2012). For these and other countries regularly conducting labor force surveys with large sample sizes, this will usually be the best vehicle for adding questions on migration. Nevertheless, the sample of recent international migrants will almost always be rather small for meaningful analysis.

2. Demographic and Health Surveys

DHS surveys (and their main antecedent, the World Fertility Surveys) have been carried out in developing countries since 1972, with nearly 300 DHS surveys conducted since 1984 in over 90 countries, generally based on nationally representative samples of women of child-bearing age. Sample sizes vary from modest to medium—from 5,000 households in earlier years to more recently as many as 30,000 households in some countries seeking statistically reliable sub-national estimates for provinces or regions. Besides fertility, use of fertility regulation methods, maternal and child health, and HIV/AIDS, DHS questionnaires collect some basic socio-economic information relevant to migration, such as household composition, assets, and education. Place of birth is obtained to study (but only lifetime) internal migration, but is sometimes not even processed. The surveys almost never include any questions on international migration nor remittances.[14] Few also collect data on incomes or expenditures, or even work activity of any household member except the woman interviewed. Thus adding questions on international migrants is of little use without also adding questions on work status and employment of current and former household members as well as retrospective data on migrants, on their situation prior to arrival or departure. But since the DHS questionnaires are already quite long, this risks respondent fatigue. They are therefore not very good candidates.[15]

3. Living Standards Measurement Surveys

LSMS surveys have been implemented with World Bank assistance in over 50 developing

[13] Based on conversations with ILO-STAT officials in Geneva in May 2007.

[14] Two countries which did include short but useful modules on international migration are Colombia in its 2005 DHS survey, and Ecuador in its 2004 DHS-type survey supported by the US Centers for Disease Control (see Ojeda et al. 2005; CEPAR 2005).

[15] With their wealth of data on fertility, DHS surveys can be used to study relationships between internal migration and fertility (Chattopadhyay et al. 2006). The use of a 6-year monthly calendar to record major events including births and changes of residence is also illustrated based on the 2006 experimental Peru DHS survey (Moreno et al. 1989). See also discussion of calendars in section "Some special methodological issues related to migration data collection" below.

countries (over 80 surveys) over the past three decades, usually based on national samples with modest sample sizes (around 5,000 households, occasionally up to 10,000). LSMS surveys collect data from households in several rounds (2–4 visits to the household over a year), greatly increasing the cost per household but facilitating an even broader topic coverage than DHS surveys, including not only basic household demographics and household assets but also work activity (including seasonality) and employment of all household members, income from all sources including a farm or business, household expenditures in detail, internal migration, education and school attendance, land ownership and agriculture, and even time use. That the LSMS surveys already collect detailed data on household incomes and expenditures makes them very attractive candidates to add questions on migration, including remittances data, which would also make possible determining the quantitative importance of remittances relative to other sources of household income and hence the impact on poverty and household expenditures.

In fact the World Bank developed a LSMS module on migration some years ago, focusing on internal migration (Lucas 2000), although only a few countries have added questions to identify lifetime and fixed term international migrants. Thus the 1988 Ghana LSMS and the 1994 Peru LSMS asked (for members of the household above age 15) place of birth (noting country if abroad), emigration (at what age left, and why), where lived between birth and current place of residence, and year when came to current residence and reason. A module on emigration was also developed for Armenia, and the LSMS survey of Ecuador in 2005–2006 on 13,536 households included a module on emigrants from the household, recording their *current* age, sex, relationship, education, and whether the emigrant left minor children under age 18 behind (there being special concern at the time, following the surge of emigrants to Spain in 1997–2003, about who was taking care of them following the emigration of a parent, often the mother).

The rich topic coverage already in LSMS surveys makes them excellent prospects for adding questions on international migrants, but it also risks respondent fatigue and hence lowering overall data quality. But the most important limitation is still the sample size, as it is *usually* too small to justify adding question on international migrants since there would not be enough of them, *unless* the sample design could also be altered. De Brauw and Carletto (2010) provide a stimulating discussion of the advantages of LSMS surveys for analyzing migration, both internal and international, but also note the small sample size limits their value for studying international migration. They raise the issue of whether the sampling approach of LSMS surveys could be altered to generate larger samples of international migrants so those surveys could be more useful for that topic (*op.cit.*, p. 22). Indeed, this could be done, selecting higher proportions of households in areas with more migrants, then weighting the data to accomplish the other, usual main survey goals.

4. Other surveys[16]

Some countries carry out other types of household surveys which sometimes could be good candidates for adding questions on migration. Again, the first question to confront is the sample size. *Multi-purpose surveys* are carried out on an occasional or a regular basis by some countries on large, nationally representative samples of households, such as the Brazilian *Pesquisa*

[16] Other multi-country surveys that could be discussed in this context include UNICEF's Multiple Indicator Cluster Survey (MICS), which focus on children, and the Survey on Income and Living Conditions (SILC), a European-wide survey of 5,000–6,000 households focusing on poverty and employment, but thus far collecting nothing on migration. However, the fact that the latter have income data makes then potentially good candidates for adding questions on migration, except for small sample sizes. Many of the CIS states conduct Household Budget Surveys, with the same positive and negative possibilities. The MICS surveys could be modified to include migration to study child migration, and are likely being used for that purpose now, with increasing interest in independent child migration and trafficking.

Nacional por la Mostra de Domicilios on 110,000 households, carried out annually since 1967. Vietnam began implementing a Survey on Population Change and Family Planning in 2007, with its sample of 100,000 households said to represent 15 % of the population. These multi-purpose surveys could be useful for comparing internal and international migrants with non-migrants, gauging the impact of remittances, etc., but only after adding specific questions to identify (international) migrants (see Bilsborrow and Lomaia 2012).

Aspects of Survey Design for Specialized Surveys of Migration

Specialized surveys of migration have many significant advantages for collecting data on migration compared to censuses and other data sources discussed above, since they can be designed to include questions as necessary (plus provide better training of interviewers) to collect data to not only (a) identify migrants according to the two definitional criteria in section "Population censuses and continuous population registers" above on change of residence and crossing a recognized border, but also (b) characterize the situation of the migrant and his/her household *before and after* migration, and (c) in the detail desired, to investigate the determinants and/or consequences of migration. Surveys offer great flexibility in terms of the type and depth of information they can gather, including options for defining migrants; for collecting data to analyse the determinants of migration and its mechanisms; to collect data to analyze the consequences of migration for the migrants themselves, the household members that accompany them or that do not accompany them (remain in the origin), and/or for the communities of origin and/or destination (and countries, in case of international migration). Return migrants may also be of special interest as they may return with capital, education or new skills acquired in their place of destination or previous residence (especially if abroad) that can contribute to development in the origin area (country).

The key issue: identifying and collecting data on appropriate comparison groups to study the determinants or consequences of migration[17]

The main purpose of the survey must be determined at the outset since it affects the sample design, size and geographic distribution—viz., in what parts of the country or countries it is to be carried out. It also determines the population groups, besides migrants, for which data are to be collected to provide the *appropriate comparison or "control group"*. Despite previous urgings (Bilsborrow et al. 1984, 1997), there continues to be widespread failure to consider the issue of appropriate comparison groups in the design of migration surveys or the research literature, which results in confusion in assessing the determinants or consequences of migration and in drawing inferences for policy. The appropriate way to assess *either* the determinants or consequences of migration for the migrants themselves is to interview a sample of migrants *and non-migrants* before the migration, and then *trace* or follow them over time, including those that migrate to another country in the interest included international migration. There would then be little or no memory/recall error, nor distortion of data on the situation prior to migration, nor errors in data due to the imperfect knowledge of proxy respondents (providing data on out-migrants or emigrants from households). However, such a longitudinal or panel survey is costly and takes considerable time, including the actual tracing of migrants, especially in a large country or internationally (see, e.g., Byerlee and Tommy 1976; Bilsborrow et al. 1984, Ch. 4, 2011; Rindfuss et al. 2007).

Acquiring data in the survey on the situation of *both* migrants and non-migrants *prior to migration* is fundamental to investigate either the determinants or consequences of migration. Thus to study the determinants of migration, the *population at risk of migrating* comprises both

[17] This discussion draws on Bilsborrow et al. (1997, Chapter 6B).

migrants and non-migrants (and their households) in the areas or country of origin. Data should be collected for both groups and then pooled to provide the population at risk, from which (e.g.) logistic migration functions of the determinants of migration can be estimated, with persons assigned a value of 1 if he/she migrated and 0 otherwise. Note that if one is only interested in the determinants of why *individuals* migrate, data are needed only from a survey conducted in the areas or countries of origin: The *appropriate comparison groups* are individuals that migrate and those that do not, so data are needed on their situations (and that of their households) *at the time of migration, not at the time of the survey*.

To study the *consequences*, on the other hand, data are needed for the same two population (appropriate comparison) groups: the out-migrants/emigrants and the non-migrants (and their households) in the origin. The reason is that an appraisal of the consequences for the migrant and his/her household requires comparing their situation after migration with that of non-migrants *remaining in the place (country) of origin*. Thus data on non-migrants in the destination are *not* useful for investigating the consequences of migration for the migrants. Instead they are of use only for gauging the extent of *adaptation* of migrants—by comparing the situation of the migrants in the destination with that of the non-migrants in the destination, e.g., on employment/ unemployment, wages and incomes, housing ownership and quality, land, household assets, health, etc. To assess the consequences *for the migrant*, in contrast, it is necessary to compare their situation after migration in the destination with that of (equivalent) non-migrants *remaining in the place of origin*, where equivalence is achieved statistically through the use of multivariate regression that takes into account other individual, household, etc., factors associated with changing fortunes linked to changing one's residence. Another way of looking at this is to examine the *changes* in the welfare of migrants in the destination compared to their origin situation and compare this with the changes over the same time period of non-migrants remaining in the origin.

However, migrants include not only individuals but *whole households* that leave. And when whole households leave, there is normally no one remaining behind to reliably report on their situation before departure, to help understand why they left, much less their destination. Data on whole households that left can then usually be obtained only in the areas/countries of *destination*. Thus a household survey on migration conducted only in origin areas misses some out-migrants/emigrants—sometimes the majority—by not being able to collect data on whole households that moved, since there was no one left behind to provide data on them. This is an inherent limitation of *all migration surveys carried out only in areas/countries of origin* (Bilsborrow et al. 1984, Chap. IV; Bilsborrow et al. 1997, Chap. 6), as well as of all censuses. Data on those who left as households can usually be collected only via surveys in the places/ countries of destination.

Thus, ideally, it is desirable to investigate the determinants of migration of not only individuals but of *whole households*. This requires data from households that migrated collected in a destination survey plus data from households that did not migrate collected in their areas of origin, since together this provides the a priori population at risk of migration. It is only then that a full study of the determinants of migration can be said to have been carried out, involving separately analysing the migration of individuals and households. Has this ever been done, in all the studies of the determinants of migration (internal or international) in the literature? Probably not, which must seem a striking if not shocking discovery! The worst part is that researchers rarely recognize this, viz., the limitations of their findings, and the potential biases of their analyses and results. The consequence is that the field of migration advances at only a snail's pace, with no efforts at major methodological improvements (which also begs for more resources).

In sum, therefore, whenever possible, the ideal approach for studying the *determinants of out-migration/emigration* requires a coordinated, multi-location/country data collection effort, conducting household surveys in *both* areas/countries of origin and areas/countries of destination. Thus, for example, to study the determinants of emigration of both individuals and entire households from an origin country O to a destination country D, one needs to collect data from (a) samples of both individual migrants and non-migrants (and their households) in O, and (b) samples of migrant households from O interviewed in D. In a survey investigating the determinants of internal migration, this means the survey should be conducted in both multiple areas of origin and multiple areas of destination. Two of the first studies to do this for internal migration covering a significant area/population of a developing country were based on surveys in the 1970s organized and funded mainly by the International Labor Office in Ludhiana province, India, and in the Sierra or highlands region of Ecuador (Bilsborrow et al. 1984). Fortunately, conducting surveys in many places of both origin and destination in most countries (except the largest ones, perhaps), while evidently more expensive than surveys conducted in only areas of origin or destination, is not prohibitively expensive compared to surveys of international migrants involving multiple countries.

The same issues arise in designing a survey to investigate the determinants or consequences of international migration (emigration), requiring surveys to encompass representative samples of individual migrants and non-migrants (and their households) in the country of O, of non-migrant households in the O, and of migrant households from O observed in D. An additional complication is that the latter will usually be a tiny proportion of the population in D, real "needles in the haystack"—an extreme case of the *rare elements* situation described in section "Common existing sources of data, limitations and prospects for making them more useful" above. This was indeed observed in the first significant multi-country-of-origin-multi-country-of-destination project based on probability sample surveys on international migration, covering seven countries in 1997–98 (Schoorl et al. 2000; Groenewold and Bilsborrow 2008). In this NIDI project, there were five (developing) countries of origin (see section 5e below) and two participating developed countries of destination (Spain and Italy). In each destination country, international migrants from only two countries of origin were considered, requiring a large effort to find them (Egyptians and Ghanaians in Italy; Moroccans and Senegalese in Spain). This considerable sampling and subsequent field data collection effort in the country of destination, with little additional cost, could have sought out and identified for interview groups from other additional countries of origin.[18] Of course, to undertake such linked (at about the same time, using the same definitions of migrant, matched questionnaires, similar sampling methods, etc.) surveys of international migration requires considerable resources and coordination by participating countries.

It is important to indicate what the advantages and limitations are of the usual surveys undertaken in *only origin* or *only destination* areas, drawing on the issue of appropriate comparison groups (Bilsborrow et al. 1984, Ch. 4). Thus, as already explained, a survey conducted only in origin areas can provide the data necessary only for an analysis of the determinants of migration of individuals, and this requires that data from proxy respondents provide adequate quality data.

[18] Thus studies of the determinants and/or consequences of migration from *each* of those five (vs. two) countries to Italy could have been implemented, permitting more fascinating comparisons of not only the most basic data on how migrants from different countries differed, but how the determinants of migration differed from one country of O to Italy (which would lead to the research question, why?), and how the consequences of migrants from the countries of O differed from one to another, and for migrants to Italy vs. Spain, and why. But these comparative analyses have yet to be carried out (data continue to be available at NIDI and from the countries that make this possible, but apparently no one is funding it). See also more details in section "Some special examples of migration surveys" below.

A better survey design would have data collected directly from the migrant himself or herself, which would require following (tracing) the migrant to the destination. That migrant would then also provide the data on the situation of his/her household in the area of origin when he/she made the migration decision. This requires surveys to be undertaken in both areas of origin and destination. In this case, if a survey is undertaken in areas of destination of migrants from O, then whole households could also be interviewed, to ascertain why they migrated, obtaining data from them on their situation before migrating. Their data would then be compared with that of households in the O who did not migrate. So either way, households would need to be interviewed in both areas of O and D.[19]

Notice this approach creates a three-fold set of households to compare, for example, in studying the determinants of migration. I am not aware of anyone who has examined the data in this way. Moreover, if surveys are conducted in both areas of origin and destination, this creates possibilities for very interesting and methodologically important studies, which are still all too rare in the field of migration. For example, if the samples are of sufficient size and representative of the populations of migrants and non-migrants in *both* areas/countries of origin and destination, then one would suppose that, for example, the characteristics reported for individual out-migrants by proxy respondents in the O are the same as those provided by the migrants in the D, unless there are biases in data provided by proxy respondents (assuming the migrants are truthful about themselves!). Otherwise, any differences in the characteristics reported for migrants in the O and the D may reflect inherent biases in data. This has not been examined, as far as I am aware of, though many years ago a paper attempted to examine such biases (Yang and Bilsborrow 1993).

It is evident that the cost of carrying out this type of origin–destination survey of international migrants is magnitudes higher than of internal migrants. Nevertheless, some intriguing programs of international surveys have been conducted, though not thoroughly analysed methodologically as recommended here: Besides the NIDI surveys, there is the original Mexico-US study of Massey, later expanded to constitute the Latin American Migration Project in multiple countries of origin of migrants to the UN, involving collection of data from households at both ends of the process, though not based on nationally representative samples. The MAFE project studying migration from several Sub-Saharan African countries to Western European countries is another example (see section "Some Special Examples of Migration Surveys" below).

A final issue has to do with the reference period of the data, which for the study of the determinants of migration should be the same for migrants and non-migrants *on average*. Therefore, data on non-migrants should pertain to their situation, not at the time of the survey, but rather at approximately the time when the migrants in the sample moved. Suppose the survey uses a five (alternatively ten) year definition (cut-off) to define migrants of interest; then on average this means migrants would have left about 2.5 (or 5) years prior to the time of the interview.[20] Therefore data should be collected for non-migrants at about that same time, rather than at the time of interview, to be pooled to create the at-risk population for the estimation of migration functions. But no one does this. Existing studies almost invariably collect data on the "control group" of non-migrants *only at the time of interview*, *viz*., several years *after* the migration (and non-migration) decisions were made. The time that transpired may have led to changes, changes linked partly to the *consequences* of migration rather than the original determinants conditions, so that the situation of non-migrants captured by a survey at the time of interview reflects a mongrel combination of

[19] Additional examples and extensions to more regions or more countries are found in Bilsborrow et al. (1997).

[20] Given the natural inclination of people to better recall more recent events, the relevant reference time is likely less than the mean time in the interval, e.g., 2 or 4 years, respectively, before the interview.

the original determinants factors but as modified by changes since that time among non-migrant households. This must introduce some error in the data for non-migrants used in estimating migration functions.

Sampling in Surveys of Migration

In section "Common existing sources of data, limitations and prospects for making them more useful" above, we noted that migrants tend to be relatively "rare" elements in a population, all the more when the focus is on recent migration and/or international migration. Kish (1965) lists eight possible approaches to address the problem, but the two relevant ones here are (a) formation of strata followed by oversampling, and (b) use of two-phase sampling in the last stage. These are described below in sections "Stratification and disproportionate sampling" and "Two-phase sampling to select households at the last stage", followed by some alternative sampling approaches in sections "Other approaches to sampling", and "Some special examples of migration surveys" some examples of "Stratification and disproportionate sampling" and "Two-phase sampling to select households at the last stage".

Stratification and Disproportionate Sampling

Stratification is the division of the population into sub-groups or strata according to objective criteria or variables available for the population of interest. Stratification eliminates the variation between strata from the computation of total variation in the sample, thus reducing total variance. The gain in reducing total variance by stratification can be substantial, to the degree the strata are formed such that elements within each stratum are similar to each another (reducing intra-stratum variance) while the strata means differ as much as possible. To be effective, stratification should be carried out based on variables that are the focus of the study or that are closely associated with the key variables being studied. For a survey on migration, the logical basis for stratification is the proportion of migrants in the population, or the proportion of households containing a defined migrant. This creates strata in which the areas are similar in this proportion, and implicitly in conditions linked to the proportion; this means that areas with high proportions of out-migrant households should tend to be more similar to each other that to areas with low proportions. So stratification kind of groups or filters areas by proportion of households with a migrant.

This discussion assumes that a population frame exists that can be used to create a sampling frame to select a sample of migrants (and non-migrants, depending on the survey purpose: see section "Aspects of survey design for specialized surveys of migration" above). Since problems in finding a population frame and in sampling for immigrants are less in developed than developing countries (but the principles are the same), the text here will assume that the survey is undertaken in a developing country, focusing on emigration. To construct the sampling frame, it is first necessary to determine if data are available to identify households which report one or more recent emigrants. (The discussion below couches the discussion in terms of emigrants, but procedures are the same for internal out-migrants as well.) If not, sampling of first-stage area sampling units or primary sampling units (PSUs) has to be based on selecting areas based only on the population sizes of places (say, from the most recent population census), that is, sampling areas with probabilities of selection proportional to estimated population size (PPES). This would likely also be the procedure in selecting second stage area units from the PSUs, and so on, down to the last stage or ultimate area units UAUs. Such a sample is self-weighting, but not at all efficient for fieldwork in a survey focusing on migration.

Thus it is assumed in the discussion below that some data are available to identify migrants, so that it is possible to do better than select areas

randomly based only on PPES (or judgement[21]). Thus data are assumed to be available from a census (better if more recent) to identify households according to whether they contain a recent emigrant or not. Since the emigrants themselves living abroad are generally not available for interview, the census should have a question to be asked of a proxy respondent as follows: "Is there any person who used to live in this household (or who lived here X years ago) who left to live abroad and has not returned?" Tabulating these responses makes it possible to calculate the *proportions* of households containing international migrants in the various administrative areas of the country, making it possible to form strata based on these proportions. Then in the first stage, a sample of provinces/states (the PSUs) is selected using oversampling of areas with higher proportions of emigrant households. High proportions of provinces will be selected into the sample from strata with high proportions of emigrants, while low proportions of provinces will be selected from strata with low expected proportions of emigrants. This is *stratified sampling*, with oversampling of PSUs with higher expected proportions of migrants. The same procedures can be used in subsequent sampling stages. Thus, within sampled provinces, the procedure can be repeated, to again form strata of (e.g.) districts in the sample province based on the proportions of households with emigrants in the district, which then makes possible oversampling districts with higher proportions of migrants. This procedure can continue at each sampling stage, down to the selection of the smallest or Ultimate Area Units, at the last stage of area sampling (UAUs), such as census sectors or blocks.

[21] In the absence of any data on migrants, or even data on population from a recent census, there may yet be another alternative, to select regions/areas based on "expert" or informed judgment, that is, people knowledgeable about where emigrants mostly originate from. This could be used to stratify areas roughly according to the expected intensity of emigration, then oversample those regions or PSUs with high expected proportions of emigrants compared to areas with less migration intensity. This was done in several NIDI countries (see section on "Some special examples of migration surveys" below).

A major reason for using *multi-stage sampling* as well as stratification is that it leads to a more efficient allocation of field work (including mapping, listing households, and interviewing) and hence substantial cost savings in field work. It also reduces the work of preparing a sampling frame at each stage since tabulations of the proportions of population constituted by international migrants only need to be prepared for and grouped into strata for the districts of the PSU sample provinces already selected in the first stage, and similarly at each subsequent stage, down to processing data for the census sectors or UAU's only for those districts already selected from the sample provinces. On the other hand, in countries with emigrants widely dispersed across areas of the country, and sufficient budgetary resources to pay for the transportation costs of collecting data from a widely dispersed sample, the entire stratified sampling process can be conducted in a *single stage*, with the strata formed on the basis of the proportion of households with one or more emigrants in each of the (thousands) of census sectors in the country (here the UAUs are also the PSUs!).

In stratified sampling, one common *optimal* statistical procedure is to select the number of elements from each stratum at each stage (provinces, districts, ..., UAUs) in proportion to the estimated *variance* of the stratum's elements with respect to the variable of interest. With p, the proportion of households containing a migrant as the key variable, the fraction of the (e.g.) districts to be selected from each stratum is proportional to the estimated standard error of p for the stratum (s), which may be represented by $s = \sqrt{[p(1 - p)]}$. Making sampling fractions proportional to s is a form of *disproportionate sampling*, a highly efficient procedure to sample rare elements (Kish 1965, pp. 92–98, 142–144, 279–282). This was the intended procedure in the NIDI project (section "Some special examples of migration surveys" below). But in fact, the probabilities of selection from the various strata can be chosen to be almost anything, *even more disproportionate*, provided one is careful to keep track of the sampling proportions at each stage so that the data collected can be weighted (by the inverse

probabilities of selection of elements in each sample area, such as a province or district). This is illustrated in Table 7.1 below, based on hypothetical but not unrealistic distributions of the PSUs (districts) across strata, showing a few districts with high proportions of households with (recent) emigrants, and large numbers with few emigrants. It can be easily shown that simple proportionate allocation (col. 5) will result in a very inefficient allocation of fieldworkers and small numbers of households found with migrants (note that most areas sampled are in stratum 4 with hardly any migrants), compared to disproportionate sampling in columns (6)–(8). Column (8) is optimal allocation, in one statistical sense (selecting inproportion to the standard error of the stratum mean), while columns (6) and (7) show even more disproportionate allocation schemes, which yield even more efficient allocations of fieldwork in the sense of leading to fieldwork in a sample with more expected households with migrants.

Note that each of the four sampling schemes is representative of the whole country, since some districts are selected at random from each of the strata that the country is divided into, but the adjusting weights (see section below) can become extremely large for the few households selected from the low-prevalence strata, so it is ultimately necessary to decide upon a trade-off between efficiency and representation. For example, in the extreme case, the 28 sample districts n_h could all be selected from strata 1 and 2, resulting in finding more migrants, but having no coverage of the vast area of the country in strata 3 and 4. This would definitely *not* be a nationally representative sample. For that, some of the n_h sample units must be selected from each of the strata of the country.

Two-Phase Sampling to Select Households at the Last Stage

Once the UAUs are selected, it is necessary to identify which households contain migrants of interest, which will usually still be a small minority of households despite the sampling efforts above. As noted in discussing the need for appropriate comparison groups, it is necessary to select a sample of households without migrants as well as with (e)migrants. The first step is to conduct a *listing operation*, to administer a very short questionnaire, in a quick visit to all households in the small geographic areas or sample UAUs, to list households to identify those with and without a migrant. Then households with a migrant are oversampled relative to non-migrant households using a pre-defined algorithm. This is the first phase of *two-phase sampling*. The second phase is to then conduct interviews in those selected households with migrants and those selected households without migrants. Careful track needs to be taken of those sampled and those successfully interviewed in every sample UAU so as to weight the interviewed households by the inverse probability of selection, as is done with the sample areas selected in prior sampling stages. The mechanics of two-phase sampling are described elsewhere (Bilsborrow et al. 1997). When the weights are properly used, the sample can be weighted up to represent the total population of the country.

Other Approaches to Sampling

The methods outlined above in a-b find strong support in the scientific literature as they yield probability samples (see, e.g., Kish 1965; Sirken 1972, 1998; Sudman and Kalton 1986; Sudman et al. 1988), in which the results are representative of and hence generalizable to the entire study area population. However, several other approaches for selecting rare elements are often used or recommended in surveys of migration, including *snowball samples, venue-based samples, and respondent-driven sampling (RDS)*. The rationale for these methods is that (a) there is sometimes no adequate population frame available on migrants, and (b) using probability sampling methods (as above, in two-phase sampling in the last stage) may require a large and too-costly (for many applications) screening effort.

Table 7.1 Illustration of proportionate and disproportionate sampling

Stratum	N_h	Mean proportion international migrants	(1) × (2)	Standard deviation	n_h with			
					Proportionate allocation	Disprop. allocation A	Disprop. allocation B	Disprop. allocation C
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	10	.1	1	.30	1	7	10	5
2	20	.05	1	.22	2	7	10	6
3	50	.01	.5	.10	5	7	5	8
4	200	.001	.2	.03	20	7	3	9
Total	280				28	28	28	28

These may be discussed in the present context as follows. First, s*nowball samples*--which includes variations referred to as multiplicity samples, network samples, and adaptive sampling—originated with Goodman (1961), and can be very useful to create a frame for populations which are extremely small and elusive, or ones which wish to hide, such as minorities that feel discriminated against, persons with HIV/AIDS, undocumented migrants, drug users, homeless persons, etc. The procedure in snowball samples (and RDS) is to (somehow) identify some *initial persons* with the desired characteristic, ask them to identify others they know with the same trait, then repeat the process various times, creating chain referrals. Eventually, after many rounds, it is thought, virtually all persons in a given place/area/city with that characteristic will be identified. These could then constitute the sampling frame, from which persons could be scientifically selected for interview/study.

Sirken defined *multiplicity surveys* as those in which "sample households report information about their own residents as well as about other persons who live elsewhere, such as relatives, friends or neighbors, as specified by a multiplicity rule adopted in the survey" (Sirken 1972: 257). That is, each person or household can report on other persons/households linked to it, so people have more than one chance of being identified and included in the sample, but do not have equal chances of being identified. A common, desirable approach is to use a multiplicity rule based on clear relatives, such as siblings, so that the chance of anyone being included depends on the known number of siblings. But there cannot be any ambiguity about the number of ways in which a person can enter the sample, so "relatives", "friends", "other persons with HIV/AIDS", or "other undocumented migrants" or "migrants from country A" does not lead to a known specific number. In the case of migrants, two studies provide some useful information. In a UNHCR-sponsored survey in 2006 on Colombian migrants (documented and undocumented) in Ecuador, fewer Colombians were found than desired in the survey, so a snowball component was added during the fieldwork, in which the recent Colombian migrants encountered were asked to identify other recent migrants from Colombia (outside their household, and non-relatives). Operationally, it was not successful as the *a priori* expectation was that on average each respondent would provide one other findable Colombian migrant, but in fact the linkage was not 1–1 but 1 to only one-third (Bilsborrow et al. 2011). And in an interesting study of Japanese return migrants to Brazil in Sao Paolo, the characteristics of persons found with a snowball sample were compared with those of a probability sample and found quite different, indicating clear biases (McKenzie and Mistian 2009). So there is little support so far for using snowball sampling to study migration.

A second approach which has similarities to snowball sampling is *respondent driven sampling* (RDS), which has recently attracted the attention of many scholars[22] and is used for studying similar kinds of rare or "hidden" populations that snowball sampling was developed for. RDS originated with the seminal article of Heckathorn (1997); its utility depends on the nature and success of the referral practices for recruitment (process by which persons with the trait of interest recruit additional persons) and the social structure of the study population. Innovations in use of financial incentives, such as coupons for persons to turn in for cash for each person recruited who agrees to be part of the sample, have helped RDS successfully recruit waves of persons with the trait of interest (such as commercial sex workers in China, intravenous drug users in the US, etc.). However, some researchers have found that the method has problems in covering the population of interest, yielding an unbiased sample, and providing a reliable estimate of the proportion of the population with the trait of interest even after many rounds of referrals, particularly if the population

[22] C.f. many papers on RDS presented at the International Conference on Methods for Surveying and Enumerating Hard to Reach [H2R] Populations, organized by the American Statistical Association (New Orleans, Oct. 31–Nov. 3, 2012).

is one of high homophily (that is, contains totally self-contained subgroups, in which no member has any relationship to anyone in other subgroups). This leads to high sampling variance. In addition, the initial placement of seeds is fundamental to the reliability of the final results, which should not have to be the case (Salganik and Heckathorn 2004; Gile 2011; Yamanis et al. 2013; Verdery et al. 2013). In terms of migrants, it may still have, or come to have, value for recruiting small and rare populations, such as of undocumented migrants (by offering a basis for creating a sampling frame of those persons) provided there is reasonable knowledge of the location of the population to distribute the initial "seeds". Nevertheless, the method may have significant recruitment costs due to necessary incentives to pay, and more important, is not practical for large areas such as whole countries, in contrast to cities, for example.

A third approach, in the absence of an adequate national sampling frame, is to create a frame using "*venue-based", "time-location", or "aggregation points" sampling*. This was done in the case of Italy in the NIDI project (Blangiardo 1993; Groenewold and Bilsborrow 2008). It begins with assumptions about places that migrants of interest (in this case, Ghanaian and Egyptian immigrants) frequent, called "aggregation-points" in Italy. These included mosques/churches, employment offices, entertainment venues, health care centers, public squares in their main neighborhoods, homeless shelters, population registration offices, etc. Then fieldworkers prepare a sampling frame consisting of a list of migrants by screening migrants visiting each venue and asking each what other venues he/she visits, with what frequency and at what times of day (while obtaining the name, address, etc., of the screened person). This leads to a population of migrants with the frequency of visiting each venue, from which one can determine the *ex-ante* probability of selecting each person from a random sample of venues and times to select a sample for the detailed interviews. At the time of the detailed interview, more precise data are collected on the respondent's frequency of visiting each aggregation point, leading to ex post corrected weights for weighting the data for all persons by the inverse of the adjusted probability of selection, just as is done with stratified samples based on census data on the prevalence of migrants. This approach has the important advantage of covering undocumented as well as documented migrants. It evidently assumes that every international migrant, legally in the country or not, visits at least one of the places thought to be frequented by that immigrant group, so to the extent some immigrants do not frequent any of them, the sample frame would be incomplete and biased. However, the method seemed to work adequately in Italy (*op. cit.*), and was also used and the findings compared with those of a probability sample of migrants in Sao Paolo (McKenzie and Mistian 2009).

Some Special Examples of Migration Surveys

A meaningful compilation and assessment of important, innovative surveys of internal and international migration is beyond the scope of this chapter, but it is important to cite some to illustrate the progress (and lack thereof) in recent decades. Seminal surveys of migration to collect data to investigate the determinants of migration using linked origin–destination surveys were implemented in the 1970s in India and Ecuador (Bilsborrow et al. 1984), and since there have been a plethora of interesting specialized surveys on internal migration in Mexico, Brazil, China, Thailand, Indonesia, Egypt, Nigeria, Ghana, Burkina Faso, Kenya, and doubtless other countries. Rrich data collection (including on migration) began with the Malaysian Family Life Survey in 1976–1977 (repeated in 1993), which has since been replicated in Indonesia (with the initial survey in 1993–1994, and follow-ups in 1997, 2000, 2007–2008, and 2012, covering half the provinces but representative of 83 % of the population), and in Mexico (in 2002, 2005–2006, 2009 and 2012). Such longitudinal surveys have important advantages

over single round surveys in general for the analysis of changes over time, and especially for the study of migration, although these family life surveys do not include specific questions pertaining to the *time of migration*, so factors related to migration are not linked over time. These data sets, based on fairly large samples (though still with limitations in sample size for studying recent migration) are facilitating a host of important substantive studies, but few methodological studies. An exception to the latter is the interesting work on sample attrition and its impacts over time in Indonesia (Thomas et al. 2001). In general, attrition has not been found to be a significant problem in most of these longitudinal surveys (nor was it in an earlier study of migrants to Bangkok: Yang 1994). But in the case of Indonesia, attrition was reduced by an actual tracing effort, which in most cases would require considerable resources (it would have been useful to compare the results for migrants and non-migrants with and without including the traced out-migrants).

Surveys of international migrants present additional complications compared to surveys of internal migration (within a single country), since conducting surveys in areas of both origin and destination requires the involvement of two or more countries, if not the explicit collaboration of two governments, and their national statistics offices. Given the value of multiple-country projects for the study of international migration involving countries of origin and destination (see section "Aspects of survey design for specialized surveys of migration" above, and Bilsborrow et al. 1997), several projects which do this are worth highlighting here.

The first is the Push-Pulls project of the Netherlands Interdisciplinary Demographic Institute (NIDI), which developed common definitions, similar designs for probability samples, and matched questionnaires for all origin and destination countries, to collect data in surveys in 1997–1998. Countries participating were Egypt, Turkey, Morocco, Ghana and Senegal—the five countries of origin—and Spain and Italy. The goal was to carry out household surveys in each country on samples of migrants and non-migrants using the probability sampling methods of sections "Stratification and disproportionate sampling" and "Two-phase sampling to select households at the last stage". Due to resource limitations in some countries and the lack of adequate sampling frames in others (viz., no recent census with data on migrants of interest), in practice the survey domain was never the entire country but rather several major regions of emigration/immigration, sometimes chosen by expert judgement (Senegal, Ghana). Indeed, only Turkey and Spain fully used the recommended methods above, and even then Spain added a non-probability, snowball sampling component to increase its immigrant sample size. All countries used two-phase sampling, with the five origin countries screening 4,512 to 27,438 households in order to interview 1,563 to 1,974 households with and without emigrants (Groenewold and Bilsborrow 2008). While a number of good country reports were produced (e.g., Ayhan et al. 2000, on Turkey), and an overall report (Schoorl et al. 2000), methodological studies comparing the data on migrants from Ghana and Egypt to Italy with data on in-migrants from those countries, as well as the same corresponding data for Moroccan and Senegalese migrants collected in the origin with data on those migrants in Spain have not yet been carried out, though the data are available at NIDI.

Another multi-country project on international migration similar to that of NIDI is MAFE ("Migrations between Africa and Europe"), which began with surveys on migrants and non-migrants in Senegal and surveys of Senegalese migrants in France, Spain and Italy, in 2008, and has been expanded to more countries of destination but fewer of origin than NIDI, now including also Belgium, Netherlands and the United Kingdom as well as the Democratic Republic of the Congo and Ghana. The surveys also generally have smaller sample sizes than in the NIDI studies, with the total of under six thousand households in the nine countries combined. The analysis expands upon NIDI to include more coverage of circulation, adaptation and return migration, with much information including now the basic data itself available from its website, www.mafeproject.

Finally, the World Bank and European Union/Eurostat have embarked on several multi-country regional projects, with the former's Africa Migration Project implementing common questionnaires focusing on emigration in six countries (Senegal, Mali, Nigeria, South Africa, Kenya and Uganda), which also included internal migration. Household and community surveys were carried out in the six countries in 2009–2010, based on probability samples covering the country, to the extent possible. Meta-data and the actual data are available from the World Bank website, accomplishing a major change in the policy of the Bank to make the data publicly available. In a second project, the EU has taken the lead in the on-going Mediterranean Household International Migration Survey Programme (MED-HIMS), which involves much larger full-scale national probability surveys of 10–20,000 households with emigrants, return migrants, and non-migrants, selected from listing operations of 50–100,000 households per country. The original goal was to undertake surveys in eight countries in the region. Egypt completed its survey in 2013, as did Jordan, with the next surveys planned in Morocco and Tunisia. National statistics offices implement the surveys, drawing on data from censuses and previous surveys to create sampling frames. While the gold standard desired is to use the methods of sections "Stratification and disproportionate sampling" and "Two-phase sampling to select households at the last stage" above to design the sample, this was not done in Egypt as the most recent (2004) census data were considered to provide an extreme and biased undercount of households with emigrants. Thus PSUs were selected instead based on PPES, drawing on updated lists (to 2010) of households and addresses from the National Sample Survey. In contrast, for Jordan the procedures in sections "Stratification and disproportionate sampling" and "Two-phase sampling to select households at the last stage" were implemented to create the sampling frame, and it is anticipated that Morocco and Tunisia will incorporate questions in their 2014 population censuses to also make that possible when they undertake their MED-HIMS surveys planned for 2015 (Bilsborrow 2013). Finally, the World Bank may be starting to support a third set of linked international migration surveys--using common questionnaires, sampling methods and analysis plans—in the CIS states including Russia, with Tajikistan and Russia conducting linked surveys in 2014.

With the existence of so many multi-country survey projects with mostly overlapping goals, the question arises whether this is a step towards developing common across-project methods as a step towards achieving a World Migration Survey. We return to this in the conclusions.

Questionnaire Content and Design

By now there have been a plethora of surveys on internal and international migration, administered for national or sub-national populations in a many countries by a host of public and private sector institutions and investigators. The content (topic coverage) and length of questionnaires is affected by the purpose of the survey, the administering organization's mandate (e.g., if governmental), and cultural, socio-economic and geographic considerations. For example, the purpose of the survey may vary from providing basic data on the numbers and characteristics of migrants to providing data to examine the determinants and/or consequences of migration. The former requires data only on things such as who the migrants are, and their age, sex, education, and little more, besides perhaps their origin or destination and time of migration. It is possible for existing data collection systems such as a population census or registration system, or a representative labor force, household budget or fertility/nutrition survey to collect some of this basic data at low cost by adding a few questions to an existing survey instrument. However, few surveys will have large enough sample sizes to provide useful data on international migrants, but they certainly can on internal migrants. But for the analysis of the determinants or consequences of migration, much more detailed data are required, including data on the situation of the

migrant and his/her household of origin *at the time of migration* and not only at the time of the survey, which is the time frame of censuses of population and household surveys (section "Aspects of survey design for specialized surveys of migration" above).

Moreover, given the inherent multidisciplinarity of the study of migration, different variables are focused upon (with others neglected), depending on the disciplinary orientation of the investigators. This makes it unrealistic to propose that there exists, or ought to exist, a uniform approach, though there is much to be said for scholars from different disciplines to work together towards such an approach. Much has been learned from the diverse migration surveys in recent decades, albeit rarely coordinated across institutions or countries, though there are important exceptions mentioned in section "Aspects of Survey Design for Specialized Surveys of Migration". Two earlier books attempted to summarize some of the possibilities for improving surveys of internal (Bilsborrow et al. 1984) and international migration (Bilsborrow et al. 1997), but much has been learned since. Thus, it is known that many factors at not only the individual and household levels but also the context (community, region, and indeed country) can affect the determinants of migration and its consequences for the migrant, the household, community and region of origin of the migrant; the household, community, and region of destination; and the countries of origin and destination. Without going into detail, these documented factors (though not in all studies!) include such individual factors as age, sex, education, marital status, relationship to head, work experience/occupation, language ability, previous migration experience and travel away from the home. At the household level, relevant factors may include household size and composition, land size and ownership, dwelling quality, other household fixed and liquid assets, location of the household relative to roads and important local and national cities and labor markets, previous experience of household members with migration and migration networks. Finally, community characteristics may influence migration propensities of individuals as well as of whole households from the community, including its population size and characteristics such as age composition, ethnicity and diversity, previous experience with and prevalence of in-migrants and out-migrants (latter creating networks of potential sources of encouragement and support in areas of destination); availability and quality of land; economic characteristics, such as types of work/occupations available and changing patterns over time; the presence of educational and health facilities, as well as of other infrastructure; existence of community organizations and participation levels; presence of amenities, entertainment, natural beauty or national parks, or major bodies of water (river, lake, ocean) near the community; and community location relative to paved roads, market towns, regional and national capitals; and access to transportation and communications. Perhaps in part because of the lack of data sets with comprehensive data at all three levels, multivariate statistical research to date has often not led to strong results and clear findings for many of the variables/factors mentioned, particularly at the community or contextual level.

It is worth mentioning one particular, unresolved important issue peculiar to questionnaire design for collecting data for the study of the determinants of migration:whether the approach should use the "last move" or a "migration history" approach. The former focuses data collection on the circumstances surrounding a single, most recent move, of the migrant, while the "event history" collects data on multiple events (including leaving and returning, then departing again) over some period of time. Both may involve time cut-offs (limiting data to moves within the previous, say, 5 or 10 years). The former has the advantage of being able to collect more detailed data on the last move, particularly if limited to recent moves, while the latter collects data on many more moves from the same population. An illustration of the former is found in Appendix A, adapted for internal migration from a questionnaire developed by the author for a World Bank project on international migration in the CIS states. It collects data on not

only the usual characteristics at or just before the migration move (age, education, marital status, employment, etc., of the person and the household), but also more details than is practical to collect in an event history format on employment conditions and income prior to the move; whether the migrant (and non-migrant) had a farm or business in the origin prior to moving, and its size/quality; reasons for leaving the place of origin and (separately) for choosing the destination; and details on assistance the origin household may have provided the migrant and remittances subsequently received.

Note that the Appendix only provides the key module of questions to be asked of a proxy respondent about a recent out-migrant from the household. Other customary modules in the survey would cover current household composition, dwelling characteristics, assets, employment and income of household members, etc., as well as some of these characteristics at the time of migration. Similarly, it is necessary to collect data for *non-migrants* in the same areas of origin on the same topics, as they are needed to include in the population "at risk of migration"). This will include others living in the same household as the migrant who did not migrate, as well as those living in non-migrant households. Data should be collected in the survey, as much as possible, on their individual and household characteristics *at about the time the migrant left*. For statistical analysis, these data for at-risk non-migrants are pooled with the data for migrants to estimate the so-called migration function, on the determinants of migration. (A similar argument, with a quite different questionnaire design, can be adduced for collecting data from a "last move" approach for analyzing the consequences of migration, at the various levels: see Bilsborrow et al. 1997.)

The alternative "event history" approach, in increasing vogue, is illustrated by an example adapted from a survey designed by Clark Gray and myself for studying the determinants of out-migration from rural Ecuador (see Appendix B). As with the "last move" approach, it also assumes that the other customary topics are part of the full questionnaire, but it does not require a separate questionnaire for migrants and non-migrant adults in the household, since data for all adults ever living in the household in the time period referenced are covered by the event history module, one per adult. For the time frame covered (9 years in this case), key characteristics and events of the person are recorded for each year horizontally, including age, place of residence (and hence out-migration and return migration as well), level of education and school attendance, marital status, and whether sent money back to the household. For example, age is incremented by one each year, and marital status is recorded with a code that if not changed is simply recorded in the field with a straight line to the right up to the last year. Separate questions are asked about work on the family lands in a year, or on other lands as an agricultural worker, or in non-agricultural work. The type of non-agricultural work and estimated income is recorded only for the 12 months prior to the survey interview (C.16), as is income from agricultural work (in both cases, whether the person is in the household or away). In addition to the individual history module, an event history approach needs to have a module on changes in *household* factors over the same time period, to capture changes in household factors over time that may influence migration, including household size (from births, deaths, migrations), changes in land and dwelling ownership, major purchases/sales of land, whether the household had a business, and possibly even changes in land use, cattle owned/sold, etc.

In both formats, most of the topics listed previously in this section can be covered, with only two time referents per household in the last move approach which have to be explicitly covered (time of interview and time when someone last left the household), while the event history approach typically seeks less detailed data but over a longer time frame. Each has some significant advantages over the other, however. First, the advantages of the event history approach include: (1) a concise rectangular questionnaire format for intense data collection; (2) collecting data on multiple events per person, providing a fuller

historical picture of the person's migration experience, including return migration; (3) greater statistical power based on a larger number of events (viz., out-migrations and return migrations) per person (though clustering must be controlled for); and (4) obtaining data in exactly the same way for migrants and non-migrants. Because of its obtaining less data on each event, it can (5) collect data for a longer time in the past, so the problem of selecting a sample of *recent* migrants (needle in the haystack) is reduced. On the other hand, the last move approach has one substantial and one secondary advantage over the event history approach: (1) far more detailed data can be collected on (more) recent events, and on a single event (with a differently formatted, longer questionnaire), permitting a more fully specified and estimable statistical model, exploring more variables; and (2) less memory recall error and better data due to the time reference being more recent usually. A key question is then, does the additional detail lead to improved quality of variables, as well as a broader set of variables, so that the last move approach can lead to better estimates of the determinants of migration in a given context compared to an event-history approach, which covers more moves over a longer period but with fewer and less well measured variables?

The two approaches have never been tried on the same sample population, which is sorely needed. Thus a survey should be designed to collect data precisely to make possible implementation of both approaches for the same population, to permit comparison of results: what is learned from each that is not learned from the other. Which is more useful? For what purpose? Does the context of the study (country, culture, internal vs. international, etc.) affect the answer to this key methodological issue in migration research? In fact, a survey has just been initiated in Guizhou province China in which it has been possible to try both approaches.[23] Unfortunately, as the main purpose of the survey was not to study migration, it was not possible to use either questionnaire approach fully, as pressures were strong to keep the questionnaire from becoming too long. Thus, for example, the last move approach did not include (from Appendix A) questions 7.7, 7.12–13, 7.18, 7.23–31, and 7.9–7.10 and 8.5–8.6 only partially. In the case of the event history, the time frame was 2000–2014, but questions C4 and C12 and C16 details on time worked were excluded (see Appendix B). It was also not possible to have two separate research teams conduct the data collection independently, although that could have had its own bias. As is, the data were collected in 2014, so it will be intriguing to see what can be learned by comparing the two types of analysis possible from the two forms of data collection on the same persons in the same households.

A note on differences in the content of questionnaires for international migration

Several additional complications result from surveys on international migrants compared to internal migrants, arising out of its different spatial and legal (national sovereignty) dimensions. To begin with, the move is usually much farther than internal migration, so the cost is higher, and it is more selective of those with the funds to cover the cost (the poorest usually cannot move internationally), who have migration networks, family members able to provide assistance, and language skills. Of particular interest is that the international migrant is by definition leaving the protection of the state in which he/she is a citizen and about to be subject to, exposed to, the treatment/reception of another state. Thus the legal dimension of the move is paramount, including whether the migrant has legal papers/visa, someone to provide assistance after arrival (e.g., prior migrants from his/her country, ethnicity, village), and language ability. Earlier visits to the country, sources of information and their quality, and labor recruiters can play major roles, for good or bad (trafficking, exploitation). Many international migrants are undocumented, and many more are refugees or asylum seekers, requiring additional questions.

[23] "2014 FNNR Socioeconomic, Migration and Environment Household Survey", Li An, Dept. of Geography, San Diego State University, Principal Investigator (funded by US National Science Foundation).

Some Special Methodological Issues Related to Migration Data Collection

In this section some thoughts about methodological issues in the field that require more attention, or any attention at all, are brought together, along with a few issues that are already receiving attention. Given the multi-disciplinary nature of migration and everyone's distinct discipline and country experiences, there is nothing magical or comprehensive about this list.

1. There continues to be widespread lack of recognition of the need for *appropriate comparison groups*, to pool observations of particular groups of migrants and non-migrants at the same time for the analysis of either the determinants or consequences of migration (section "Aspects of Survey Design for Specialized Surveys of Migration"); is this just the ostrich approach, to avoid recognizing that surveys undertaken only in origin areas/countries or only in destination areas/countries have fundamental weaknesses and limitations (though evidently less expensive)? Collecting data on individual out-migrants from proxy respondents is a second best solution.
2. On the other hand, for the study of whole households' migrating, it is usually necessary to *conduct surveys in both areas of origin and destination*, to obtain data on appropriate comparison groups, to study either the determinants or consequences of the migration of whole households, which may be a large part of migration. Thus, non-migrant households need to be interviewed where they are, in areas of origin, while the same is true for whole households out-migrating, who can be found, after migration, only in the destination. Surveys in both origin and destination areas are also needed for key methodological studies (see section "Aspects of survey design for specialized surveys of migration", and points 3, 7 and 9 below).
3. How can data be collected on *whole households* departing? On studies of internal migration, linked origin–destination surveys can do this, finding households in places of destination. For international migration, it is desirable to have surveys conducted in both countries of origin and countries of destination (Bilsborrow et al. 1997; Groenewold and Bilsborrow 2008). Panel data can be useful to identify whole households leaving, notably, when they are not there at follow-up, but knowing even only why they left or their destination is usually difficult to obtain reliably from neighbors or others left behind.
4. How much do we really know about stated *reasons for migration*? How do they compare with the results of statistical analysis? Is it therefore useful or not to use data on reasons to break down people according to categories of reasons (or the "main" reason), such as work, marriage, or education, to *then* statistically analyse the factors that determine work migration, marriage migration or education migration separately, as they are likely to be quite different?
5. Can surveys be used to estimate the *proportion* of migrants in a country/region/city? In the absence of any reliable census or other data, government officials sometimes ask this question. While it is not what migration scholars usually want to do, it is possible to select a random sample of (micro) areas, based on population PPES, or a stratified random sample, with the strata formed based on perceived expert (judgment) beliefs about migration prevalence differences across the country. Once a representative sample of small areas is selected, two-phase sampling could be used in the last stage to list households with and without migrants, to obtain a count of migrants and non-migrants. But once such a large effort has been made, why not conduct detailed interviews and administer a full migration survey?
6. How useful are data on *migration intentions*? Are they good predictors of subsequent migration? If so, migration intentions could be collected routinely in surveys to provide planners with invaluable information, especially if multivariate research can identify

the factors affecting intentions, including some that could be altered by policy. However, there continues to be at best unsettled debate about whether migration can be or has ever been influenced by policy makers (e.g., reducing rural–urban migration in developing countries) in the absence of draconian measures (like road blocks, and house-to-house checks in cities). So then what do we really know about (the determinants of) migration intentions? To what extent are intentions determined by the same factors as actual migration? Has there been any empirical study of this comparison based on the same study population? Are there trigger factors in stimulating migration? Perhaps the field, as in other respects, could learn from the experience of fertility. Many years ago, Westoff (1977) compared survey data on fertility intentions of women with subsequent fertility behavior, and found that even though the correlation was low at an individual level, *aggregate* predictions based on prior intentions were good. Could the same be true of migration, internal or international? Would the agreement be better for international than internal migration, given its much higher costs, cultural and family disruptions, and longer advance planning time? While this is an area of needed research, it would best be done with actual panel data, to compare people's intentions with later actions (ex post rationalization means that it is not meaningful to compare whether people migrate after the fact with what they think their intentions had been). In one recent interesting study, Van Dalen and Henkens (2008) studied emigration intentions of 1489 inhabitants of the Netherlands in 2004–2005. They found that intentions are some what useful predictors of emigration, with 24 % of those with an intention to emigrate actually emigrating within 2 years compared to less than 1 % of those not intending to emigrate. Potential emigrants who did not emigrate often had encountered health problems. They also found that, overall, factors that statistically affect intentions were the same as those affecting actual emigration (age, gender, good health status, prior emigration from the household (networks), self-efficacy, etc.), but further work on other populations and countries is needed before this can be accepted, or reliable individual factor predictors found.

7. A big issue in migration surveys is how reliable are data from *proxy respondents*? This is of particular concern in migration surveys since it is usually the way data can be collected on out-migrants. While some researchers have conducted surveys of migrants when they return to their origin households at holiday or harvest times, this is certainly not all emigrants, so there is likely serious selectivity (the successful ones will return, both because they can, economically, and to show off, as well as to bring gifts, etc.). Thus in most cases, data will need to be collected from a proxy respondent in the origin household. But who is this person? Certainly not always the household head, nor a parent or child of the migrant? Surveys should train interviewers to carefully probe to identify who best knows about the out-migrant. In any case, some years ago Moore (1988) reviewed the literature and found that previous studies finding response bias or error in proxy reports usually had serious methodological shortcomings, while the better studies (which controlled for potential self-selection bias) found no significant distortions in data provided by proxy respondents or conflicting evidence. However, he still concluded that the "lack of convincing evidence of quality differences is not synonymous with convincing evidence of no quality differences" (p. 155), and "well-designed studies of the self/proxy issue are rare". Differences could well depend on the proxy respondent's characteristics. But surely this depends crucially on *what* items of information are asked

about the respondent. Every one of the studies reviewed by Moore was limited to inquiries about whether the reference person had a serious health problem, which was compared with actual medical examination data. Other studies found on the web also focus narrowly on health, or on social-desirability distortions in proxy reports. *Is there any careful assessment of proxy respondent bias in migration data?* This requires that data be obtained from the person directly (assuming that can be considered correct, which should be evaluated also when possible) and compared with that provided by proxy respondents. If the migration survey involves tracing, a most useful comparison of data provided could be made for individual migrants. This could document important biases, even common ones, which it would then appear should not be ignored by researchers in reporting their survey results. For example, does the proxy respondent report receiving lower remittances from the migrant than the migrant reports sending? This leads back again to the considerable value added by linked origin–destination area surveys. Thus, even without tracing, if large, representative samples are selected in households of origin and of migrants in destination, on *aggregate* how different are the data reported (e.g., on remittances)?[24]

8. What is the *value of collecting community- or contextual-level data* for studying migration? There is a strong theoretical basis for believing that context affects migration (e.g., Hugo 1981; Bilsborrow et al. 1984, Ch. 11), perhaps even more than it affects fertility, because of strong effects of employment and living conditions on migration decisions (see Sjaastad 1962; Todaro 1969; DaVanzo 1981; Stark 1991), as well as network effects extending beyond household networks to community and ethnicity networks, widely documented in the sociological literature. While there is some evidence of contextual effects on migration decisions (e.g., Lee 1985; Bilsborrow et al. 1987; Massey et al. 2009; Gray and Bilsborrow 2013), the evidence is generally not as strong as one would expect (nor perhaps is it for fertility and other forms for human behavior). Could this be due, at least in part, to investigators spending far less effort on designing community-level questionnaires and on their proper implementation compared to the effort on household questionnaire development and implementation? One method for improving community level data collection, drawing on the fertility calendar developed for interviews of women by Freedman et al. (1988) is a "neighborhood history calendar" (Axinn et al. 1997; Williams 2009; Reed et al. 2010). Axinn et al. also discuss how the relevant boundary for facilities (to affect fertility) may differ for schools and health facilities. Surely such issues are crucial to study in exploring contextual effects on migration as well (*viz*., people being willing to go farther to commute to labor markets for work in lieu of migrating relative to the distance they are willing to go to attend school or for health care—but what is really known about such differences?). Are there any relevant methodological studies pertaining to migration? *There should be*, as part of the study of contextual effects on migration. Finally, it should be mentioned that contextual data are needed for the formulation of fully specified multi-level models, to properly incorporate individual, household and contextual factors together in the analysis of the factors affecting migration decisions.
9. Much of the analytical literature (led by economists) has focused on the determinants of migration. What about the *consequences of migration*? Where is the careful multivariate literature on this? Could this not be of considerable policy value, to be able to

[24] An interesting study (with analogy to the famous Kurosawa movie, "Rashomon"), is Akee and Kapur (2012).

predict better who is likely to benefit from migration, in what environment, and how? But first, one has to ask about for whom are the consequences of interest: for the migrant individual or the migrant household, for households/ individuals remaining behind,[25] for origin or destination communities, or for origin or destination regions or countries? How does one infer policy implications if the results differ? In fact, no one has had to confront this question since it appears that no one has tried to do all this, though there must be some large-scale surveys that could be used to attempt it. Second, most research on "consequences" is not that at all, but rather only on *adaptation* of migrants (section "Aspects of Survey Design for Specialized Surveys of Migration" above). Third, there are a host of potential substantive consequences, or adaptations, but existing studies virtually always look at only one dimension, such as impacts on employment, household income/expenditures, assets, "happiness", fertility, marital stability, or health. This is indirectly stimulated by journal editors limiting the length of articles to be published, but very few books look at multiple dimensions in detail. We need more of this, including more detailed descriptions of data collection methodology in general in journals which publish papers on migration, to permit readers to assess whether the methods are shaky, and therefore whether the results should be believed or not.

10. There are major advantages in having data from *longitudinal or panel surveys* compared to single round surveys, which have particular value for studying migration. First, even in origin area-only surveys, one can identify households that migrated away, as well as individuals, and formulate better models of the determinants of out-migration. (However, information on the destination or immediate factors involved in the decision of whole households to migrate will still be lacking.) Second, it allows *examination of attrition bias*, which has to be a concern in migration surveys since migration is itself selective, so the remaining population should progressively become different and less comparable to the original at-risk study population with the passage of time. How important is attrition bias? Thomas et al. (2012) used two rounds of the large Indonesia Family Life Survey (4 years apart) to investigate this, finding 18 % of the baseline households moved, 6 % being "local movers" with another 6 % found through a virtual national tracing operation, as they moved to other areas where the project was operating. So only 6 % were then lost to follow-up. Not surprisingly, with 94 % followed, measured attrition bias was minimal, and households traced and not traced were very similar.[26] They concluded that "the scientific value [of tracing] easily outweighed its costs."
But is this true? First, the costs of tracing were unusually low, since the national survey had staff in place (and sunk fixed costs), so marginal costs were very low. Second, if the characteristics were so similar, what would have been lost without tracing? This provides a useful *lesson regarding tracing*: If the characteristics of the population traced and not traced are expected to *not* be similar *and* if tracing costs are low, e.g., the country is small or the survey has a national staff already available to search out migrants in most destinations without major transportation costs, then tracing is highly desirable. But if the tracing costs are not small, and the proportion that can be found of the persons who migrated away is low, then what?[27]

[25] E.g., see study of effects of remittances from male household members working abroad on children's education back home, by gender (Assaad 2010).

[26] Yang (1994) in a study of migrant adjustment in Bangkok also found attrition bias minimal.

[27] A later paper based on tracing over 10 vs. 4 years found more attrition effects, and recommended procedures to reduce attrition (Thomas et al. 2012).

Indeed, other studies of tracing migrants have found it is very costly and/or difficult (Byerlee and Tommy 1976, on Sierra Leone; Bilsborrow et al. 2011 on Ecuador). More needs to be known about both attrition bias and how to better trace migrants within countries, not to mention across countries in origin–destination surveys on international migration.

11. Do the *factors affecting migration vary with the type or distance* of migration?
White and Lindstrom (2005) noted that local moves tend to be tied to life-cycle changes (marriage/divorce/children being born or departing) and housing, while long distance moves are due more to employment factors. They review some empirical literature, and cite evidence for the US based on Current Population Survey data. But the issue is a much broader one, and relates to questionnaire design and the purpose and scope of the research. This includes whether internal migration is an antecedent to international migration, or whether they are substitutes (trade-offs). Evidently, the answers depend on the time frame, which can be explored with either repeated surveys (preferable, but expensive) or retrospective data collection, including migration histories (section "Questionnaire content and design" above). In studying factors affecting out-migration from the Chitwan valley in Nepal, Bohra and Massey (2009) found distance to be closely linked to the purpose of migration, with, e.g., local migration more likely to be female and for marriage. Gray and Bilsborrow (2013) found the same results comparing out-migration from rural areas of Ecuador to local areas versus non-local internal destinations vs. international destinations. Thus different effects on migration to local vs. internal vs. international destinations were found for household composition, land size and quality, rainfall, home ownership, distance to the nearest road, migration networks, and community variables.

12. What are the *prospects for using Big Data* to study migration? Hilbert and López (2011), in an assessment that is already out of date, categorize the incredible explosion in information linked to new forms of digital data compared to traditional analogue data. The latter include everything stored on paper (including from all censuses of any kind, surveys, financial reports, books, magazines, newspapers, journals, population registers, border statistics, photographs on film, audio-tapes, video tapes (VHS), etc. Until the new Millennium, analogue data dominated, but the authors demark the "digital age" as beginning in 2002. Thus digital data storage constituted about 1 % of all data in 1986, 25 % in 2000, 50 % in 2002, 94 % in 2007, and doubtless far more by 2015, and refers to data stored on CDs, computer hard drives, compact discs, memory sticks (USBs), computer servers and main frames, DVDs and blue rays, drop boxes and clouds, etc. It includes data from satellite imagery (including all climate data); conversations and data on land lines and cell phones, and communications on the internet, Google and the web; photos and exchanges on Facebook and Twitter; everything from digital cameras and video games, etc. Its data files stretch the capacity of the largest to store the data or to analyse it. A single data set may have many petabytes (thousands of terabytes, or 10^{14} bytes). One-half petabyte can store the DNA of the entire US population (Wikepedia 2013a). Going beyond NASA and recent discoveries of the US National Security Agency eavesdropping, the UNGLobal Pulse website (UN 2012) documents research projects underway using Big Data, including using global phone communications to analyse public perceptions of women's employment in Indonesia, global food security, and surveys of global well-being through cell phone surveys in 30 countries. Lazer et al. (2009), noting how big data is transforming biology and physics, called for the same thing in

social sciences, "computational social science", noting that we swipe transit cards to use public transportation and credit cards for purchases, and are monitored by video cameras in increasingly many places, and make most of our phone calls from mobile units—all leaving digital imprints and creating massive data files on our movement and spending habits. How can these data (legally or not?) be used to study human movement, circulation, and even migration, over time? This is a major new challenge for migration scholars.

In particular, phone companies now have records of their clients' cell phone calls for years, and there are now probably more cell phones than people in the world, with most people even in rural villages of the poorest countries now having cell phones (Wikepedia 2013b). This provides a gold mine of data, which could be used for studies of networks in sociology, internal migration and other movement, and linkages between human mobility and the spread of contagious diseases. Phone records, with identities purged, are already starting to be used to understand human mobility, including local movements in the US over a 6-month period (Gonzalez et al. 2008), seasonal labor migration in (Niger Aker et al. 2011a, b) and Uganda (Muto 2009), and migration and short-term mobility and commuting in Rwanda (Blumenstock 2012). While none of the studies so far goes beyond using digital records to map movements, mobile phones are likely to become useful for conducting surveys, as found in Tanzania (Mushi and Whittle, 2013). For migration, this technology could be useful and cost effective for obtaining descriptive data and asking additional or follow-up questions to a survey over the phone, or for panel studies or tracing migrants who move but keep their cell phone. Nevertheless, it seems most unlikely that sufficient, good quality data to study the determinants or consequences of migration could be obtained via cell phone, in contrast to in-person surveys (perhaps using tablets instead of paper questionnaires). In any case, there is also the issue of whether the Big Data (e.g., phone records) can actually be accessed for research (with the data de-anonymized to guarantee against deductive disclosure), and equally important, but so far mostly ignored by fans of Big Data, whether it can be used to select a sample that represents the population of interest (Boyd 2010).

Conclusions

In lieu of trying to summarize this long chapter, touching a diversity of issues, from definitions to data collection to gaps in methodological research and experimentation in the field of migration, some main themes may be usefully reiterated.

1. First, the importance of arriving at clear *definitions* is emphasized at the outset of this chapter, even if the media and some social scientists do not understand it—to define "migration", two-dimensionally, as a move with the purpose of changing the usual place of residence which involves crossing a political boundary within the country (internal migration) or an international border (international migration). All other moves are *not* "migration" but rather different forms of geographic mobility. This does not obviate the use of terms such as "temporary migration" and "seasonal migration" if they involve a *temporary* change of residence. Note there is no time dimension requirement for "migration", that if someone has just arrived (or just left) a month or even only a day ago with the *intention* of changing his/her residence and it involves crossing a border, then it is indeed migration at that time, even if the intention is not later realized.
2. A major issue in studying the determinants or consequences of migration is that of determining who constitutes the *appropriate comparison group*, which links directly to the importance of designing surveys to *collect data in both areas of origin and areas of destination*, if possible, even for surveys of

international migration. For studies on the determinants of migration, individual (out-) migrants should be compared with (and pooled with for statistical studies) non-migrant individuals in *both* migrant and non-migrant households in origin areas. This makes possible a limited type of analysis of the determinants of (individual) migration using data only from origin areas, but the only meaningful analysis of the consequences possible is on the consequences of (individual) out-migration for origin households (the situation of households with out-migration can be compared with that of households without out-migrants). Note that since whole households that migrate are not available, if the migration of households is not trivial, then migrant households should be sought in places of destination to conduct an adequate analysis of migration, with the appropriate comparison group being non-migrant households remaining in origin (for studies of the consequences as well as the determinants). In addition, even for studying individual out-migrants, collecting data in the origin means collecting it from proxy respondents. While such data appear to usually be reasonably reliable in migration surveys, there are evidently advantages in interviewing the migrants directly through a destination survey, and ideally tracing, to follow the precise migrant from the interviewed origin area household. While these fundamental issues are still often not understood by migration researchers and policy-makers, there are other important reasons for implementing linked origin–destination surveys, including a host of important methodological studies that are wanting in the field.

3. To study migration (beyond counting migrants and their basic characteristics), *longitudinal data* are desirable, to collect data through retrospective questions or panel surveys. To study the determinants or consequences, again, data are usually needed for not only the (current) time of interview but *around (or just before) the time of migration*. This is true of questionnaires focusing on the "last move" as well as those using event histories (section "Questionnaire content and design"), although a key methodological issue in migration is to design studies to directly compare the results of using the these two different types of questionnaires. Apart from "longitudinal data", panel surveys can be especially useful to study migration. Thus the second survey can immediately determine which households have left, so that data from the first round on those households that left and those which did not provides appropriate comparison groups for analysing who and partly why certain households (and individuals) left—what were their characteristics and those of their households and communities prior to migration. This requires that the panel observation are not far apart: for this, 1 year is good, 5 years too long, as the factors linked to migration at the time of the move are more likely to have changed over 5 years. Note that the destination of whole households that left will usually not be known, though perhaps the type (internal vs. international) could be determined from others remaining behind.
4. Since migrants (especially recent ones) are usually "rare elements", it is highly desirable to use specialized sampling methods to ensure fieldwork is efficiently directed to areas where migrants are more likely to be found. This requires an adequate sampling frame with information on the prevalence of households with migrants of interest so that strata can be formed, then stratified sampling involving oversampling areas with higher prevalence of migrants, and finally two-phase sampling at the last stage. In the absence of a good frame (e.g., a previous census with some data, even imperfect, on migration), areas may be usefully stratified based on expert judgement. A key question is how much is lost when a good frame is not available, which could be explored with methodological studies of the same population based on a good frame and a (real or pretend) bad frame.

In addition, there needs to be more comparison of other ways of sampling "rare elements" from a population than probability sampling, including venue-based samples and respondent driven sampling.

5. From the perspective of global development and reduction of poverty, it is now recognized that not only is internal migration intimately linked to socio-economic development in developing countries (both as cause and effect) but so is international migration, with global flows of human capital and resulting migrant remittances larger than ever before, and facilitated by new forms of communication (including mobile phones) and relatively cheap transportation. While individual countries should be responsible for their own national data collection on internal migration to meet their perceived needs, the question arises of whether a world (international) migration survey would be desirable and possible in the near future.[28] There are already a number of multi-country regional programs of international migration underway (see section "Sampling in surveys of migration")—why not coordinate these as a start towards a world program—to use common definitions, scientific sampling, similar questionnaires, data file formats, and analysis plans? This could lead to improvements in data (by matching data on flows of migrants between origin and destination countries) and understanding of determinants and consequences worldwide. Countries could cover internal migration as well as international migration, as most would want to do. Countries of the world are increasingly linked by human movements as well as by trade in goods. Therefore, a better understanding of international migration flows will help governments as well as people make decisions of how to improve their welfare via migration.

The field of migration has advanced little from the 1960s in comparison to fertility, which has benefitted enormously from the programs of the World Fertility Survey and Demographic and Health Surveys. In the absence of any larger-scale, coordinated data collection, with common use of definitions and better and more coordinated data collection and analysis across countries, this gap seems likely to only continue to widen.

Appendix A. Example of "Last Move" Questionnaire (Adapted from Survey on International Migration in Tajikistan, 2013; English draft of R. Bilsborrow, for the World Bank)

Section 7. Migrant Questionnaire

Instructions for interviewer: This section is only for persons who left within the past 10 years and were at least 15 years old at the time of leaving. This refers to their *last* outmigration from the household (hh), in case the person X had left before, whether during the reference period or previously. The (proxy) respondent providing information about the out-migrant should be the person in the household most knowledgeable about the migrant.

7.1 What is the name (X) of the out-migrant?
7.2 Gender: 1 Male 2 Female
7.3 When did X leave this hh to live elsewhere (another district, province, or country) (*last* time, if X had also left to live elsewhere earlier but returned)?
7.4 How old was X at that time?
7.5 Why did X leave here? (ALLOW MULTIPLE RESPONSES)
   1. To work
   2. To study
   3. To marry, accompany spouse or boy/girlfriend
   4. To accompany other family member
   5. Family, personal problems with some family member
   6. Personal problems with someone else

[28] Cris Beauchemin (2013) presented a proposal to create a new Committee on Migration Data to the International Population Conference of the International Union for the Scientific Study of Population in Busan, Republic of Korea, in August 2013.

7. Political problems/conflicts with government
8. Other [specify_____)
9. Don't know (DK)

7.6 Who made the decision for X to migrate?

7.7 At the time when X left, who was living in your household?

1. Same as current hh composition (*see Household Roster in section 1; confirm it is identical*)
2. Different from current composition: Please tell me about any persons who were in the hh then but no longer are, and which members in the hh now were not in the hh at the time MMYYYY when X left (COMPLETE LIST BELOW)

NAME	Relationship to head	/Sex/	Age/	Disappeared What happened to? (Circle appropriate response)	Added / How did join hh?
_____	_____	___	___	Died/left hh	Birth/moved in
_____	_____	___	___	same	same
_____	_____	___	___	same	same

7.8 Why did X go to that particular destination? (CIRCLE RESPONSES MENTIONED.)

1. Thought there were jobs there, or work with better pay
2. Had job waiting, or transferred by employer
3. Had close relatives/friends there
4. Had good information about it
5. Close, not expensive to travel there
6. Knew there were people there from this community
7. More, better quality of land there
8. Good prospects to open business there
9. Better education there, for self or children
10. Better quality of life there
11. Better climate
12. Better health care
13. Other (specify _____)

7.9 Did X have any relatives or close friends living in (DESTINATION) *or in any other location* outside this district before X moved there?

1. Yes
2. No (SKIP TO 7.11)

7.10 In which places principally (tell me how many of *each of the following* were already living abroad (in ANY foreign country) when X left to live in (CURRENT RESIDENCE)?

Location		Spouse	Children	Parents	Siblings	Other relative	Friends (special)
_____	___	___	_____	___	___	_____	

7.11 What was the marital status of X at the time of leaving? _____

7.12 Did he/she move with anyone else then (or within 3 months, did others join him/her)?
1. Yes
2. No (SKIP TO 7.14)

7.13 Who accompanied X (or joined X within a few months after)?

7.14 What was the level of educational attainment of X when he/she left?

7.15 During the period of 3 months prior to leaving, was he/she mainly . . .. . .
1. Working?
2. Looking for work? 7.16 How long? _____Mos.
3. Studying? (SKIP TO 7.33)
4. Taking care of own children, doing housework at home, etc.? (SAME)
5. Other? (specify_____) (SAME)
9. DK

7.17 Was (X) working for pay for someone or for a business, or making income from his/her own business of any kind, or managing a farm, in the last months before leaving?
1. Yes, working for pay
2. Yes, managing some kind of business or service (SKIP TO 7.22)
3. Yes, farming (SKIP TO 7.27)
4. No, just looking for work (SKIP TO ZZ)

7.18 What was his/her occupation? _____

7.19 What was the main economic activity of the place where X worked? _____

7.20 Was X working full time or part time?

7.21 About how much do you think he/she was earning then? _____
(SKIP TO 7.33)

7.22 What kind of business or service did X have here in the last months before moving?
1. Manufacture something _____
2. Repair something _____
3. Professional, such as lawyer, doctor, accountant, etc., with own office _____
4. Rent out land or building
5. Buy and/or sell things
6. Have restaurant, or cook and sell food to others
7. Personal services, such as washing clothes, providing haircuts, massage, etc..
8. Other (specify _____)

7.23 Did he/she have a building or fixed location to operate this business (not part of home dwelling)?
1. Yes
2. No

7.24 Did X have any paid employees?
1. Yes
2. No (SKIP TO 7.26)

7.25 About how many (most of the time, on average)?
1. 1–3
2. 4–9
3. 10–99
d. 4.100+

7.26 Taking into account his/her costs of materials, and any other costs for labor, utilities, rent, etc., about how much net income or profits do you think X was making in a normal month in the months before leaving?
1. _____
2. Refused

3. DK
(SKIP TO 7.33)

7.27 On the farm that X managed in the months before leaving, how much land did X have?
1. Owned _____ ha
2. Rented _____ ha
3. Provided rent free _____ ha
4. Other (specify _____)
5. TOTAL LAND available _____ ha

7.28 Did X grow crops? Major crops
1. _____ 2. _____ 3. _____

7.29 Did X raise animals? Type of animal
1. _____ 2. _____ 3 _____

7.30 Did he/she have any farm employees?
1. Temporary workers, at planting, harvesting, etc., times
Number total during year estimated _____ (person-months)
2. Permanent workers all year
Number _____ 3 None

7.31 Did X have any of the following to use on the farm
1. Farm building(s)
2. Tractor
3. Other farm machinery
3. Farm tools

7.32 About how much net income do you think X made during the 12 months before leaving (or how much per month on average, counting good months of harvests or animal sales and other months of little or no sales)? _____

7.33 Has X worked since arriving at (DESTINATION)?

7.34 When did his/her most recent/current work begin? MMYYYY

Etcetera on living conditions, etc., in place of destination (for studies on consequences).

Now I would like to ask you about whether you have ever sent any money to help X, or if he/she has ever sent anything to you or anyone in your household.

8.1 When X left your household to live elsewhere, did you/your household give him/her any money to help him/her, to pay for the trip or to help him/her when he/she first arrived in DESTINATION? (last time, if left more than once)
1. Yes
2. No (SKIP TO 8.3)

8.2 About how much did you give X then? _____

8.3 Did you later send X any money?
1. Yes, in the first months after he/she arrived there
2. Yes after that
3. No (SKIP TO 8.5)

8.4 Have you sent X any money or goods in the past 12 months?
1. Yes, money 8.4a How much altogether? _____
2. Yes, goods 8.4b About how much were these goods worth? _____
3. No

8.5 And since X arrived in DESTINATION, has he/she ever sent you any money or goods?
1. Yes
2. No (END OF INTERVIEW)

8.5a When was the *first* time X sent you anything? MMYYYY

8.5b Has he/she also sent you something since then, whether regularly or not?
1. Yes, monthly or more often
2. Yes, quarterly
3. Yes, irregular
4. Yes, about once per year
5. Yes, less often than once per year
6. No

8.6 Has he/she sent you or anyone in your household any money or goods in the past 12 months?
1. Yes
2. No (END OF INTERVIEW)

8.6a When was the *last* time X sent money? MMYYYY

8.6b How much did he/she send? _____

8.6c Is this about what he/she usually sends?
1. Yes
2. No 8.6d How much does he/she usually send? _____

8.6d How many times did X send money to this household in the past 12 months? ___

8.6e About how much altogether did X send in the past 12 months? _____

8.6f How does he/she usually send the money?
1. Western Union
2. MoneyGram
3. Bank transfer
4. Money Order through post office, cashier check
5. Through a courier, friend
6. Using mobile telephone
7. Other (specify _____)

8.6g Did X also send any goods to the household in the past 12 months, like appliances, furniture, etc.?
1. Yes Which items? _____
2. No

8.6h Did he/she (also) bring any money or goods in person in any visits to your house during the past 12 months? (if made more than one visit with goods, combine). Do not include normal gifts for birthdays.
1. Yes, money ——8.6i Total amount _____
2. Yes, goods —— GO TO 8.6j
3. No (END OF INTERVIEW)

8.6j What kind of goods did X send (8.6g) or bring to the household in the past 12 months?

8.6k About how much do you think all these things are worth? _____

8.7 (Check response to 8.h, if answers code 1 continue, if not, END INTERVIEW)

Thinking of the money X has sent you or brought you in the past 12 months, how was it used? (READ EACH ITEM.)

END OF INTERVIEW ABOUT OUT-MIGRANT FROM HOUSEHOLD

APPENDIX B. Adapted from "Survey on Migration and Natural Resources, Ecuador, 2008" (developed by Clark Gray and Richard Bilsborrow)

C. INDIVIDUAL HISTORY

(Complete one sheet for each resident aged 14+ in the year and for each former member who was 14+ at the time of migrating away or dying.)

I am going to ask you about some events in the life of this person beginning with the year 2000.

Activity/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
C1. Age Record years after death by X									
C2. Starting with 2000, where did (NAME) mainly live? In this house...0 In another house in this community …9 Elsewhere…list below (1-5) and note number in box.									

Community	District	Province/Country	Rural 1/Urban 2
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

C3. If (NAME) was outside this community, Did he/she send money to any relative or friend? No 0 Yes 1									
C4. If (NAME) was outside this community, Did he/she send money to anyone in this community? No 0 Yes 1									
C5. What was the level of education attained? Codes 0 Primary 1…P6; Second.1…S6; Univ 1…U6									
C6. Since 2000, was (NAME) attending any educational establishment? No 0 Yes 1									
C7. What was his/her marital status? (see codes)									
C7A. If current status is married, in consensual union, divorced, separated or widowed, How old was he/she when he/she got married (the first time)? _____									
C8. Since 2000, did he/she work on the family lands, whether owned, rented, provided free, or share-cropped? No…0 Yes…1									
C9. Since 2000, did he/she work for wages or salary as an agricultural laborer? No…0 Yes…1									
C10. Did he/she ever work as an agricultural laborer before 2000? No…0 Sí…1									
C11. If he/she has ever worked as an agricultural laborer, how old was he/she when worked as an agricultural laborer for the first time? _____									
C12. (Complete below only if he/she worked as a paid agricultural laborer in 2007 or 2008): How many months did he/she work as a paid agricultural worker in the past 12 months? _____ How much did he/she earn on average per month? _____									

C7. Codes for marital status: **1**. Single (never in a union) **2**. Married **3**. Consensual union **4**. Separated **5**. Divorced **6**. Widow

Activity/Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
C13. Did he/she work for wages or salary in a non-agricultural activity? No…0 Yes…1									
C14. Before 2000, did he/she ever have paid work in a non-agricultural activity? No…0 Yes…1									
C15. If he/she has ever worked in a non-agricultural activity, how old was he/she when she first had paid non-agricultural work? ____									
C16. (Complete below only if he/she worked for pay in a non-agricultural activity in 2007 or 2008): What types of non-agricultural work did he/she have in the past 12 months? (multiple response possible) _____ How many months did he/she work altogether in the past 12 months? _____ How much did he/she earn altogether? $_____									

C16. Types of non-agricultural work: 1. Waiter, cook **2**. Security guard, police **3**. Construction **4**. Transportation **5**. Maid **6**. Clerk in store or shop **7**. Informal sector commerce **8**. Mining **9**. Public sector, teacher **10.** Other professional **11**. Other: specify_____

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Data Prospects: IPUMS-International

8

Matt Sobek

The IPUMS Projects

The Integrated Public Use Microdata Series (IPUMS) is a suite of population data projects developed at the Minnesota Population Center of the University of Minnesota. The largest of these, IPUMS-International, is the world's most extensive collection of publicly accessible population microdata. Related IPUMS databases consist of U.S. census and survey data and historical census data from Europe and North America (Sobek et al. 2011; Ruggles 2014). All IPUMS data can be accessed at no cost by qualified researchers.

The IPUMS projects share a number of key characteristics. Each record describes a person, and those individuals are organized into households. The projects follow a similar approach to data harmonization, documentation and dissemination. Common variables are coded and labeled consistently, and documentation describes comparability issues for each of these harmonized variables. All of this information is presented via a web interface that limits the display to a user's selected samples of interest. A data extraction system allows researchers to select only the variables and samples they require, defining a customized pooled dataset that they download for analysis on their own desktop. The system delivers the individual-level data on specific persons, not tables or other summary measures. Because variables are harmonized across time and place, IPUMS is optimized to support comparative research.

This chapter focuses on the largest of the Minnesota data projects: IPUMS-International (henceforth, simply "IPUMS"). The database currently contains information on 560 million people in 79 countries. For most countries IPUMS provides information directly relevant to the study of both internal and international migration, such as place of birth, prior residence, and duration of residence. The chapter starts by describing some of the attributes of IPUMS owing to its nature as census data processed for scientific use. The temporal and geographic scope of the series is discussed next, followed by the general topical coverage of the variables. Most of the remaining discussion concerns the specific migration data available in IPUMS. The chapter concludes with a brief note on data quality and a discussion of potential research directions with these data.

Census Microdata

IPUMS is a collection of nationally representative samples of individuals from population censuses around the world (Ruggles et al. 2003; Minnesota Population Center 2014). Each sample

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_8

is a unique cross section, and records cannot be linked across them. The samples are large: often five to ten percent of the national population. Because of their size, it is possible to study small population subgroups that cannot be analyzed using other sources. This can be particularly salient for migration studies that focus on specific stocks or flows. Most samples have information on migration, and all of a person's other characteristics are known as well, allowing sophisticated multivariate analysis. The IPUMS data are normally taken from the long-form census schedules when those were used, and most of the samples include housing information. Nevertheless, the data are limited by the range of questions that were asked by a given census, which are typically fewer than those included in social or economic surveys.

IPUMS samples are composed of microdata: each record describes the attributes of a single person. In addition to their personal characteristics, individuals are organized into households. This hierarchical household-person structure gives the data much of its power, making it possible to inter-relate the characteristics of co-resident people in creative ways. To fully exploit this feature of the data, IPUMS constructs "pointer" variables that identify the location within the household of each person's mother, father, and spouse, if they were present (Sobek and Kennedy 2009). The pointers make it straightforward to compare the characteristics of spouses, to attach parents' characteristics to children or vice versa, and to construct unique household or family-level measures. For example, one can make a variable for spouse's migration status, mother's birthplace, or number of own children in school. The household organization of the data makes it well suited to analyses of migration effects on the family economy and household structure.

The IPUMS data have some limitations inherent to their origin as public use samples drawn from censuses. Although large, the data are still samples and sometimes have too few cases to yield reliable results for certain subpopulations. The sample designs also differ, and this can have an impact on variance estimation (Cleveland et al. 2011). The biggest practical limitation for most researchers, however, stems from measures taken to prevent identity disclosure of people in the database. Of these measures, the greatest concern for migration analysis is the suppression of low-level geography. As a rule, IPUMS does not identify places with less than 20,000 population, combining smaller units until they meet that threshold. Some countries impose their own higher minimum population requirements. Fortunately, most countries provide geography for at least their first- and second-level political divisions, such as governorates and districts in Egypt or departments and municipalities in Colombia; but some only provide the first-level divisions—the equivalent of states in the United States or Brazil. The lack of small-area geographic detail can make it difficult to disaggregate cities from their surrounding regions and impossible to specify villages and other small places. Some of these and related limitations will be discussed where relevant below.

Scope of the IPUMS Database

The 2014 version of IPUMS includes 258 census microdata samples from 79 countries, documented in Table 8.1. The database covers the full spectrum of economic development: roughly three quarters of the countries and two thirds of the samples are from the developing world. Seventeen countries are on the United Nations list of Least Developed Countries. The temporal scope of the data series is 1960 to the present, but there is a lag of two or more years before the most recent census conducted by a country becomes available. Because most countries have multiple samples, it is usually possible to analyze change over time at national and sub-national levels. Sample densities typically vary from one to ten percent of the national population. The median sample size is 805,000 records, and the database has roughly 560 million person records in total.

IPUMS is designed to facilitate cross-national and cross-temporal research. The data extract system lets users define pooled datasets that

Table 8.1 Number of IPUMS samples by country (258 total)

Argentina	5		Fiji	5		Malawi	3		Senegal	2
Armenia	1		France	7		Malaysia	4		Sierra Leone	1
Austria	4		Germany	4		Mali	3		Slovenia	1
Bangladesh	3		Ghana	2		Mexico	7		South Africa	3
Belarus	1		Greece	4		Mongolia	2		South Sudan	1
Bolivia	3		Guinea	2		Morocco	3		Spain	3
Brazil	6		Haiti	3		Nepal	1		Sudan	1
Burkina Faso	3		Hungary	4		Netherlands	3		Switzerland	4
Cambodia	2		India	5		Nicaragua	3		Tanzania	2
Cameroon	3		Indonesia	9		Nigeria	5		Thailand	4
Canada	4		Iran	1		Pakistan	3		Turkey	3
Chile	5		Iraq	1		Palestine	2		Uganda	2
China	2		Ireland	9		Panama	6		Ukraine	1
Colombia	5		Israel	3		Peru	2		UK	2
Costa Rica	4		Italy	1		Philippines	3		USA	7
Cuba	1		Jamaica	3		Portugal	3		Uruguay	6
Dominican Rep.	5		Jordan	1		Puerto Rico	5		Venezuela	4
Ecuador	6		Kenya	5		Romania	3		Vietnam	3
Egypt	2		Kyrgyzstan	2		Rwanda	2		Zambia	3
El Salvador	2		Liberia	2		Saint Lucia	2			

include any variables they desire from as many times and places as they choose. Using the extract system it is feasible to build a single dataset containing selected variables for all half-billion persons in the database. If such a dataset would be too large, the system is capable of drawing a systematic subsample of cases. Of course, most analyses are more localized in time and place, but IPUMS offers the unique potential for truly globe-spanning research. This is a practical possibility not only because of the data extract system, but also due to the harmonization of the variable codes and to the documentation system that integrates information at the variable level across samples (Esteve and Sobek 2003). A key feature of the variable documentation compiles the census questionnaire text for all requested samples on one screen, enabling researchers to discern for themselves how question wording might affect comparability. Thus, the primary logistical barriers to cross-national studies are removed, freeing researchers to focus on substantive issues.

IPUMS disseminates data with the permission of each country's National Statistical Office. New samples are regularly added to the database, including additional countries as well as more recent censuses that add chronological depth for existing countries. A majority of the IPUMS samples are not readily accessible, if at all, from other sources. Most of the statistical offices participating in IPUMS lack their own mechanism to develop and distribute public use microdata. IPUMS does include samples that are in distribution elsewhere, but it constructs new technical variables to enhance analytical power, and may conduct minimal data editing in addition to its trademark practice of harmonizing the data to a global standard.

The geographic scope of the data series is ever-expanding, but it is richest in the Americas. Latin America has remarkable coverage, largely because of the efforts of the UN Statistical Office in Chile (CELADE), which has been archiving that region's census data for decades. There are also concentrations of IPUMS countries in Europe and parts of Africa and Asia. Some populous and highly developed countries have yet to be persuaded to join the data partnership, including Australia, Japan and Russia. The data for India and Nigeria are survey data, because an agreement to distribute the censuses has not yet been reached with their National Statistical Offices. It should also be noted that sometimes

the most recent sample for a country is fairly old, stemming from any number of reasons. Non-participating countries are regularly re-approached to join the project.

Geographic Harmonization

Geographic harmonization warrants special mention. Geography is of critical importance for migration studies, but it poses unique comparability challenges because of change over time in administrative boundaries. Principally, this is an issue for studies of internal migration, and more so for the developing world, where changes are more frequent. Most often, political units in older censuses get subdivided because of population growth. Less frequently, areas merge, boundaries move, or small units are reassigned between higher administrative levels during more thorough-going reorganizations.

IPUMS has a two-pronged approach to geography. For each country a harmonized place of residence variable holds geography stable by aggregating places into the smallest units that are consistent over time. For example, if place A divided into A and B at some point, and C later split off from B, then the unit ABC is constructed for all years. The harmonized variable amounts to a least common denominator of geographic detail over time. There are fewer, bigger units, but they define the same geographic space in each sample, and one GIS boundary file will apply across all years. A second variable for each country provides full, unaltered geographic detail for each independent sample year. Places receive the same codes across samples based on their names, but some units may not exist in all years, and their spatial footprints may change.

The internal migration geography variables—birthplace and previous residence—use the second, name-based approach to harmonization. Their codes match the name-based place of residence variable for the country, allowing direct comparisons within samples. Thus, full geographic detail is maintained, but the identified places may undergo boundary changes over time, potentially complicating temporal analysis. GIS boundary files apply to the most recent census year. IPUMS will likely construct temporally-stable birthplace and previous residence variables in the future, at least for the first subnational administrative level.

Geographic variables pose challenges with respect to scale as well as time. At the first administrative level within countries the number of geographic changes is generally limited, and comparisons over time are manageable using the existing name-harmonized variables. But roughly a quarter of samples also report birthplace or previous residence at the second level, such as counties or districts. Analyses over time at the second level may require historical geographic knowledge on the part of the researcher. IPUMS GIS boundary files apply to the most recent sample year for the first administrative level for previous residence and birthplace. In most cases GIS boundary files are not available at the second subnational level, but these will be added where possible going forward.

General Topical Coverage

The topical coverage of the IPUMS samples is dictated by the censuses from which they derive. The samples typically include variables corresponding to most or all of the questions asked in a census, but the lengths of the underlying questionnaires differ. Table 8.2 lists the most common types of variables available in the censuses. Most samples include some migration-related variables, such as place of birth or previous residence, in addition to a fairly consistent core of demographic and socioeconomic variables. All censuses have basic demographic information such as age, sex, and marital status. Questions on education and employment are likewise nearly universal, but they employ a wide variety of classification schemes and sometimes reflect national idiosyncrasies that make comparisons difficult. Fertility information is also widely available—more consistently so in developing countries—and ethnicity, language and religion are fairly common. The most direct economic measure, income, is rarely asked in censuses; thus

Table 8.2 Selected topical coverage of harmonized IPUMS variables

Group	Variable	Group	Variable
Household Variables		**Person Variables (continued)**	
Geography	First administrative level	*Fertility/Mortality*	Children ever born
	Second administrative level		Children surviving
	Urban–rural status		Details of most recent birth
Dwelling	Number of rooms		Parental mortality
	Toilet access	*Birthplace/Nativity*	Place of birth
	Construction materials		Country of birth
	Age of structure		Citizenship
	Living area		Year of immigration
Utilities	Electricity	*Ethnicity*	Religion
	Water		Race
	Sewage		Ethnic group
	Fuel		Language spoken
	Heating		Mother tongue
Amenities	Automobiles	*Education*	School attendance
	Washer		Literacy
	Television		Educational attainment
	Computer		Years of schooling
	Phone	*Work*	Employment status
Other	Home or land ownership		Occupation
	Number of deaths		Industry
	Number of international migrants		Class of worker
Person Variables			Hours worked
Demographic	Age	*Income*	Total income
	Sex		Wage and salary income
	Marital status		Source of livelihood
	Relationship to householder	*Disability*	Disability status
Migration	Residence 1/5 years ago or last move		Type of disability
	Years in current locality		Cause of disability

Selected variables only. Variable availability differs across samples

researchers often use education or occupation as a proxy. There is no information on household consumption or on the attitudes or opinions of household members. IPUMS is exploring the potential for developing one or more international socioeconomic scales based on occupation or education (e.g., Ganzeboom and Treiman 1996).

All samples identify the location of the residence in which a household was enumerated—with varying geographic specificity—and most include housing characteristics describing some physical attributes of the dwelling. Home ownership is widely available, although there is considerable diversity in the tenure arrangements reported. Many samples include access to basic utilities such as electricity, water and sewage, though this is more common among developing countries. Basic dwelling attributes such as number of rooms, presence of a toilet, amount of living area, and age of the dwelling are provided for a varying number of samples. The materials from which the dwelling is constructed are intermittently recorded in several variables, but the categories are difficult to harmonize across countries. Many samples also report the presence of various household assets, such as televisions, automobiles, and computers. IPUMS plans to construct a wealth index for developing countries based on housing characteristics, modeled on techniques developed for the Demographic and Health Surveys (Filmer and Pritchett 2001; Rutstein and Staveteig 2014).

By default, the IPUMS data browsing system displays the variables that have been internationally harmonized. All samples, however, include additional variables that were not suitable for harmonization for a number of reasons: they are sui generis or rare; they use a unique classification that is incompatible with the international standard; or there is something conceptually distinct about the underlying census question that would tend to mislead researchers if put in the context of a harmonized variable. IPUMS does not lose information. All these unharmonized sample-specific variables are available through a selection in the web browsing system. The system also identifies which variables serve as inputs for internationally harmonized variables, allowing researchers to deconstruct the IPUMS recodes and potentially devise their own. The unharmonized variables might have additional detail or different information on the topics listed in Table 8.2, or they might cover subjects not commonly included in censuses, such as contraceptive practice or household ownership of livestock or agricultural implements. As more samples accumulate in the IPUMS database, a critical mass of information on a specific topic occasionally develops, and a new harmonized variable is created to organize this information for researchers.

Migration Data

The IPUMS database contains considerable information on migration. The movement of populations is of great interest to all national statistical offices, and most censuses contain one or more questions on the topic. Table 8.3 shows the availability of key migration variables across the samples in the IPUMS database. The most widely available migration variables are of two general types: place of birth and place of residence at some time prior to the census. Each type records internal as well as international migration. An additional set of less common variables include duration of current residence, year of immigration, urban–rural status of previous residence, nationality, and reason for migration.

Place of birth is an indicator of lifetime migration. One knows the person migrated, but not when they moved or whether they made intervening moves. Place of birth somewhat underestimates lifetime migration, because some people return to their birthplace after living elsewhere. Most IPUMS samples report country of birth, thus identifying the net lifetime immigration of each foreign stock to every region and locality within the recipient country. Some IPUMS samples identify only a handful of specific countries of origin while others may identify a hundred or more; however, significant nations of origin that apply to each country are usually specified. A subset of samples provide only nativity status: they identify the foreign-born without giving their specific country of origin. No censuses record the subnational place of birth of foreign-born persons.

Place of birth for the native-born is even more widely available than country of birth. Although such subnational birthplace information is common, a majority of censuses record only the largest administrative units, such as state or province, limiting opportunities for fine-grained geographic analysis. Political boundary changes over time can be especially problematic for internal lifetime migration. Many decades may have passed for the respondent, with more potential for boundary changes and greater scope for ambiguity with respect to use of historical or modern place names for areas.

Previous-residence data are the most useful for many migration analyses. The data of this type most frequently available in IPUMS report a person's usual residence 1 or 5 years prior to the census. These period data are more likely than birthplace data to be reported at the second administrative level of the country, but the first level is more common. In IPUMS currently, the second-level geographic detail for birthplace and previous residence is available only via the unharmonized source variables. The period migration data also usually indicate the prior country of residence for international migrants. In some cases this may not be the actual country

Table 8.3 Availability of migration variables in IPUMS

Variable	N of Samples
Migration status: 1 year ago	34
Migration status: 5 years ago	93
Migration status: previous residence	75
Major/minor administrative division 1 year ago	37
Major/minor administrative division 5 years ago	83
Major/minor administrative division, previous residence	71
Country of residence 1 year ago	25
Country of residence 5 years ago	50
Country of previous residence	49
Urban status 1 or 5 years ago	12
Urban status, previous residence	17
Years residing in current locality	88
Nativity status	216
Country of birth	160
Major administrative division of birth	191
Citizenship status	133
Country of citizenship	90
Year of immigration	54
Reason for migration	22
International migrant from household	14

Some rows represent multiple variables. The universe is 258 samples

of origin of the migrant, but a step in a longer migration process.

Roughly half the IPUMS samples have period migration data, with about two-thirds of those reporting residence 5 years ago, and most of the rest one year ago. The 1- and 5-year retrospective migration data are not directly comparable. The more common 5-year variable offers a longer time window in which intervening moves, return migration, and mortality could occur. To its benefit, it tends to yield roughly five times as many migrants for study as the 1-year measure. It is also worth noting that a small number of samples have longer period migration variables of 10 years, or ones pegged to the previous census, which can be convenient for intercensal measurement.

In contrast to the specific-period migration questions, a substantial number of samples provide a person's previous residence without imposing any time frame on the question. Similar to birthplace data, one can tell the person is a lifetime migrant, but not when they moved, unless the census also asked a duration question. One does, however, know the most recent place from which the person migrated with no potential for intervening moves. In combination with birthplace, this variable can provide two data points for a given migrant, allowing study of return migration. A small number of samples have both previous residence and a fixed-date residence variable, potentially offering three data points for recent migrants. Assuming there are enough cases, it offers the possibility of studying migrants who enter a country by passing through another.

IPUMS constructs migration status variables that summarize the previous residence information. The variables record if a person migrated within the time frame of the variable between minor administrative units (when possible), between major administrative units, or between countries. These summary variables do not distinguish between different migrant streams, but they do identify short and long-distance migration as they are often operationalized. Enterprising researchers can further delineate migrants into those moving between contiguous and non-contiguous units, but IPUMS does not construct that information for users.

Data on duration of residence are a different type of migration information broadly available in censuses. The internal migration variables take two forms: years in current locality and years in current dwelling. The "locality" in this context can differ considerably in size across countries. Most samples refer to movement at the village or municipality level, but some only report migration between larger administrative units. The years-in-dwelling variable is limited in scope, but it is the only migration variable not subject to any measurement issues regarding reference periods or geographic scale. In combination with other variables it can identify short-distance moves that did not involve a change in locality: mobility as opposed to migration.

International migrants report their year of arrival in the country of residence in a number of samples. From this information IPUMS also calculates the number of years since immigration, subject to some months of rounding error, depending on the date of the census within the calendar year. In a few cases the information is restricted to non-citizens, but the data are otherwise fairly consistent in recording all foreign-born persons' date of arrival to take up residence. For each of the duration variables the data are sometimes reported in intervals rather than individual years. To make the data easier to use across samples, IPUMS converts the grouped data into pseudo-continuous form by recoding to the midpoint or the first year of the interval. Researchers must therefore take care when making certain comparisons or when calculating age at migration. The comparability documentation for the variables specifies the samples that were converted from intervals. For the samples with truly continuous data, the duration migration variables can reveal whether family members migrated together or within close proximity to each other.

Citizenship status for foreign-born persons is reported in roughly half the IPUMS samples. A number of those also distinguish naturalized citizens and stateless persons. A sizeable subset of samples indicates the specific nationality of residents; although, as with birthplace, the number of identified categories varies greatly from one sample to the next.

Over twenty IPUMS samples report urban–rural status prior to migration, almost all of them from developing nations. Countries define urban status differently, but the census migration question usually depends on the respondents, who are likely to have a fairly colloquial interpretation of "urban." It behooves the researcher to examine the census form to see exactly how the data were obtained. At this writing, IPUMS has not created internationally harmonized urban–rural migration variables. These data can nevertheless be accessed as unharmonized source variables specific to the various samples.

Approximately ten percent of IPUMS samples, all for developing countries, report a person's reason for migration. Most of these samples also include information on the number of years since migration, aiding in the interpretation of the data. All samples identify work, family and study as reasons for migration, with different types of labor migration often being delineated. Marriage is often indicated as a cause, and sometimes divorce and widowhood. A variety of other reasons are listed in various samples, with a concentration in types of forced migration due to war, disaster, or insecurity.

A handful of IPUMS samples provide a different class of migration data that does not fit within the normal IPUMS data structure: individual records for people who migrated abroad in some span of time prior to the census. These individuals do not receive regular person data in the IPUMS, because they are no longer residents in their households, or even in the country. Because these migrant records do not conform to the basic IPUMS data scheme, they are available as separate stand-alone files that can be downloaded and linked to data extracts using the household serial number. The information in the migration records is limited, so these files are not especially rich objects for investigation in themselves without linking to their households of origin. Most records indicate the age and sex of the migrant, when they left, where they went,

and possibly their reason for migrating. Because the IPUMS data are samples of ten percent or lower density, the records typically number at most a few tens of thousands. There are measurement issues as well. If a whole household migrated or dissolved, then migrant data do not exist for those persons.

Data Quality

IPUMS does not provide summary measures of data quality, but there are plans to do so. A key challenge is the difficulty devising measures that can be calculated for the entire database despite differences across samples. And there is some concern regarding the potential of specific indicators to convey a mistaken impression of the utility of the microdata samples as general purpose scientific-use datasets. For example, coverage error, such as a population undercount may not be problematic for the kinds of multivariate analyses conducted by most researchers. Content errors affecting particular variables, on the other hand, may pose more serious problems. They can stem from poor reporting or flawed data processing. Some of the latter type of error can be corrected by IPUMS when there are identified.

It is relatively easy to calculate summary measures of the quality of age-sex reporting in the IPUMS samples. The Whipple's and Myers' Indices are measures of digit preference in age reporting: the former gauges preference for digits ending in 0 or 5, and the latter for any digits. The general impression of IPUMS samples from the age quality measures is not surprising: the older samples—those from the 1960s and 1970s—are typically of lower quality than those from more recent decades; and the data from developed countries on average appear more accurate than those from developing countries. Table 8.4 presents Whipple's index values for Latin American samples in IPUMS. The measures are broadly consistent with impressionistic observations from IPUMS data processing. The samples with poor age reporting were also more prone to data structure problems like malformed households or errors in technical variables, presumably because of the limited computing resources available in decades past. But this is only a generalization, and there are outliers among old and new samples and rich and poor countries.

More sophisticated demographic evaluation methods employing information drawn from outside the census would be a significant undertaking to apply across the collection of IPUMS samples. A more limited approach to assessing data quality with respect to migration is to conduct internal consistency checks across selected variables within a sample. For example: how many persons under age five report a residence 5 years ago; or what proportion of people reporting foreign citizenship are native-born? It may also be instructive to look at the incidence of large residual categories and missing values. Such quality appraisals must, however, contend with the issue of data editing by national statistical offices. Most samples do not have detailed information on how they were processed, but inferential evidence suggests a number of them were edited for missing values. Any sample with no missing data among the basic demographic variables such as age, sex and relationship-to-householder undoubtedly underwent some level of editing. Among these samples, most do not provide flags indicating where edits occurred.

Additional consistency-type quality checks are possible where multiple samples are available for a country (see Moultrie 2012). Figure 8.1 shows completed fertility by birth year for women in four censuses of Thailand. No attempt has been to smooth the data. For any given birth year, the figures from all the censuses should be nearly identical, net of some mortality and migration effects. The data for 1990 and 2000 are highly congruent, apart from the noisiness one sees in all the samples for the earliest birth years, corresponding to elderly respondents. The 1970 and 1980 samples exhibit a similar general trend as 1990–2000, but 1980 is roughly a half-child higher per woman than the later years, and 1970 is a half-child higher than 1980. We can conclude that at least two of these censuses misreport fertility, although it would take further investigation to determine which are at fault.

Table 8.4 Whipple's index for selected Latin American samples

Sample	Index	Category		Sample	Index	Category
Argentina 1970	104	Very accurate		Costa Rica 1973	121	Approximate
Argentina 1980	107	Fairly accurate		Costa Rica 1984	108	Fairly accurate
Argentina 1991	103	Very accurate		Costa Rica 2000	110	Fairly accurate
Argentina 2001	103	Very accurate		Ecuador 1962	176	Very rough
Bolivia 1976	145	Rough		Ecuador 1974	137	Rough
Bolivia 1992	124	Approximate		Ecuador 1982	127	Rough
Bolivia 2001	113	Approximate		Ecuador 1990	133	Rough
Brazil 1960	143	Rough		Ecuador 2001	112	Approximate
Brazil 1970	126	Rough		Mexico 1960	175	Very rough
Brazil 1980	111	Approximate		Mexico 1970	148	Rough
Brazil 1991	102	Very accurate		Mexico 1990	125	Approximate
Brazil 2000	104	Very accurate		Mexico 1995	123	Approximate
Chile 1960	131	Rough		Mexico 2000	118	Approximate
Chile 1970	123	Approximate		Mexico 2005	119	Approximate
Chile 1982	104	Very accurate		Panama 1960	126	Rough
Chile 1992	100	Very accurate		Panama 1970	121	Approximate
Chile 2002	100	Very accurate		Panama 1980	112	Approximate
Colombia 1964	144	Rough		Panama 1990	109	Fairly accurate
Colombia 1973	140	Rough		Panama 2000	103	Very accurate
Colombia 1985	139	Rough		Venezuela 1971	115	Approximate
Colombia 1993	118	Approximate		Venezuela 1981	102	Very accurate
Colombia 2005	106	Fairly accurate		Venezuela 1990	110	Fairly accurate
Costa Rica 1963	125	Rough		Venezuela 2001	103	Very accurate

Only certain variables are amenable to this technique, but such consistency checks can offer additional perspective on overall census quality.

Although more an inherent limitation than a data quality issue, per se, the geographic detail in the microdata has notable implications for certain migration applications. For practical reasons, internal migration is usually defined as movement across administrative divisions within a country. These migration-defining units vary substantially in size and population between and within countries. Migration distance implied by moves between adjacent physically large Amazonian municipalities can be quite different from migration between adjacent units within a metropolitan area. Moves that occur entirely within a physically large geographic unit will not be recorded as migration in most cases, whereas relatively short-distance moves that cross a boundary will be reported. The measurement issues can be especially acute for comparative analyses including multiple countries (see Bell and Muhidin 2011). Table 8.5 reports the median population of the smallest geographic units identified in each country's most recent microdata sample. The numbers reflect differing political geographies combined with varying degrees of geographic suppression for confidentiality. The physical expanse of the units can be calculated from GIS boundary files available for most countries' highest administrative level, but that geographic information is typically lacking for lower level units.

Research Directions

The size and scope of the IPUMS database offer unique opportunities for migration research. Much of its potential lies in comparisons: between places, over time, and between different subpopulations. The database encourages researchers to think big—to look for patterns and interrelationships that cannot readily be explored with other data sources. The following discussion describes a number of research areas

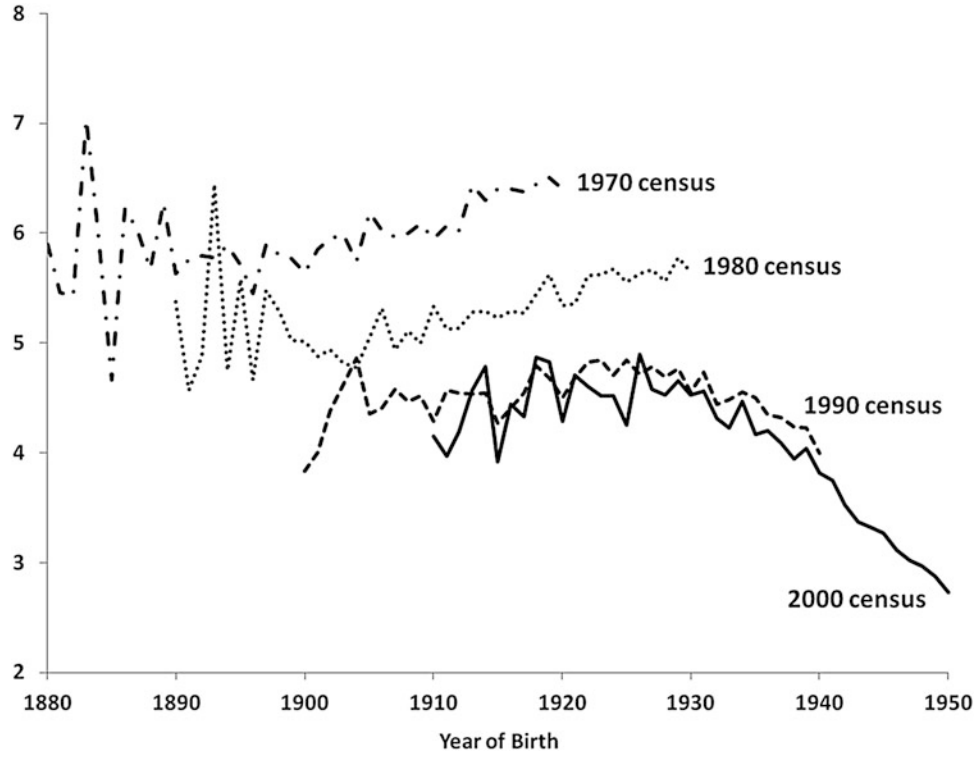

Fig. 8.1 Completed fertility by year of birth, Thailand 1970–2000
Children ever born to ever-married women age 50–90

that have attracted attention from IPUMS users and others for which the database is well suited. The international IPUMS project began in 2000, but its country coverage was fairly sparse until near the end of the decade. There are still many unexplored and underexploited aspects of the data series.

As part of the IPUMS registration process, researchers must describe how they intend to use the data. Approximately 15 % of IPUMS users identify migration or immigration as a significant component of their research. The topical distribution is difficult to quantify, but a selective listing of themes includes the following:

- Immigrant adaptation
- Socioeconomic attainment
- Migration and aging; life course
- Gender and migration; fertility
- Migration and education
- Skilled worker migration; brain drain
- Migration of children
- Forced migration
- Labor market effects

Migrants' adaptation and their status relative to non-migrants are among the areas of research for which the IPUMS data have considerable potential. Census data provide ample cases to study human capital, employment, fertility, family structure, and other characteristics. For any of these topics, migrant groups can be compared to one another and to the non-migrant population at the national or even sub-national levels. Socioeconomic status is a common basis of comparison, with educational attainment the most straightforward indicator widely available in the censuses. Despite differences in national education systems, there is considerable consistency in identifying completion of primary, secondary or tertiary schooling. Figure 8.2 shows secondary education rates for native and foreign-born adults

Table 8.5 Median population of smallest geographic unit, by country (in 000s)

Mexico	13		Uruguay	82		Senegal	253
Colombia	31		Mongolia	87		Indonesia	255
Sierra Leone	34		South Africa	96		Tanzania	301
Mali	36		Malaysia	98		Israel	332
Burkina Faso	36		Slovenia	100		Malawi	351
Nicaragua	37		South Sudan	102		Iraq	365
Brazil	41		Vietnam	110		Romania	414
Philippines	41		Puerto Rico	121		Morocco	459
Panama	43		Haiti	121		Ireland	481
Dominican Rep.	43		Zambia	126		Thailand	634
Liberia	43		United States	130		Cuba	712
Ecuador	44		Ghana	134		Rwanda	731
Spain	46		Saint Lucia	134[a]		Portugal	776
Costa Rica	47		Uganda	137		Canada	963
Ukraine	47		Armenia	142		Pakistan	1,000
Bolivia	48		Jamaica	146		Belarus	1,413
Venezuela	48		Palestine	167		Iran	1,509
El Salvador	48		Guinea	168		France	1,812
Greece	50		Sudan	174		Italy	2,114
Chile	55		Turkey	200		China	2,985
Argentina	59		Egypt	208		Germany	3,763
Fiji	61		Kenya	215		Nigeria	4,279
Cambodia	63		Austria	225		United Kingdom	5,143
Jordan	65		Switzerland	233		India	8,635
Peru	65		Nepal	240		Hungary	10,210[a]
Kyrgyzstan	70		Bangladesh	243		Netherlands	15,986[a]
Cameroon	71						

[a]No subnational units are identified
Figures refer to the most recent available sample in each country

for selected Asian countries around the year 2000. Immigrants typically have higher educational attainment, but there are exceptions and significant variation in degree. Although generally more difficult to work with, occupation data offer further opportunity to gauge migrant socioeconomic success. One can consider migrants' relative educational attainment within occupations (Thomas 2010) or even convert detailed occupations into a continuous measure of socioeconomic status to make broad cross-national comparisons (Spörlein and van Tubergen 2014).

The grouping of individuals into households in the census microdata enables analysis of migrant living arrangements. Studies can compare household structures of immigrant populations to non-migrants in their origin country (Van Hook and Glick 2007), or evaluate living arrangements of specific diaspora streams in two or more destination countries (Burr et al. 2012). The IPUMS pointer variables identify each person's co-resident spouse, facilitating study of migration effects on marriage patterns. By comparing the individual attributes of spouses, one can assess the propensity of migrants to marry within their respective socioeconomic group, such as their education stratum (Choi and Mare 2012), or to form unions with persons of other ethnicities (Qian et al. 2012). Figure 8.3 shows the proportion of married foreign-born people in Europe and the United States in a union with a native-born person. The data reveal marked differences in endogamy between countries, with intermarriage in the U.S. lower than in Europe. The data would

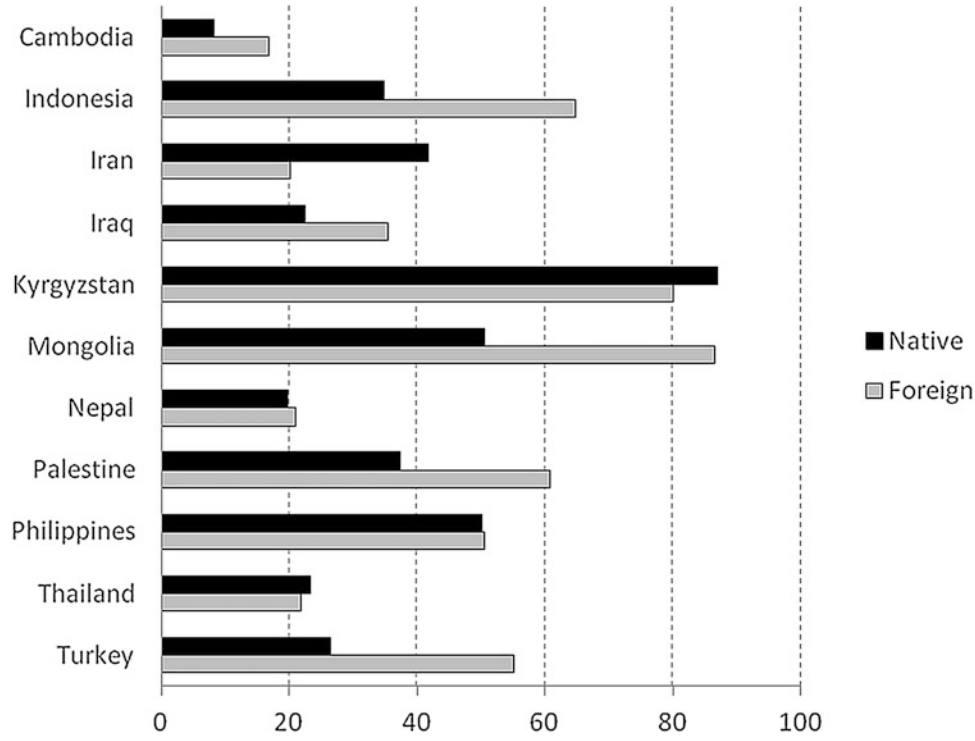

Fig. 8.2 Secondary education by nativity status, selected Asian countries (%)
Persons age 20–59

support further exploration of potential cohort effects and variation among immigrant groups both within and across countries. The census data also have considerable potential for research on migration and the life course, including elderly and retirement migration (Bernard et al. 2014; Bradley and Longino 2009).

The interplay of migration and gender is one of the most active areas of research using IPUMS. The changing sex composition of international migration flows can be explored at a multi-national scale across decades (Donato 2010). Where samples are available for both sending and receiving countries, the selectivity of migrants with respect to various criteria can be analyzed with respect to gender (Feliciano 2008). Skilled worker migration is among the many phenomena that have a distinct gender dimension (Docquier et al. 2009). Another perspective on gendered migration concerns the demographic and economic effects on the sending country, with altered sex ratios potentially distorting marriage and labor markets (Raphael 2013; White and Potter 2013).

The effect of migration on children and youth is another topic that has attracted considerable attention from researchers. The effect is usually measured in terms of school attendance or employment of migrant children (Rendall and Torr 2008). Schooling is not difficult to measure with the census, but child employment can be problematic due to differing minimum ages for reporting work and the degree to which unpaid family labor may go unreported. Rather than the migrants themselves, one can focus on the children left behind when family members seek work abroad (Halpern-Manners 2011). The characteristics of the receiving area with respect to public services, such as the prevalence of housing units with electricity and sewage, can be a factor affecting the propensity of families to migrate with children (Archambault et al. 2012). Children migrating without relatives are another topic that can be explored with the

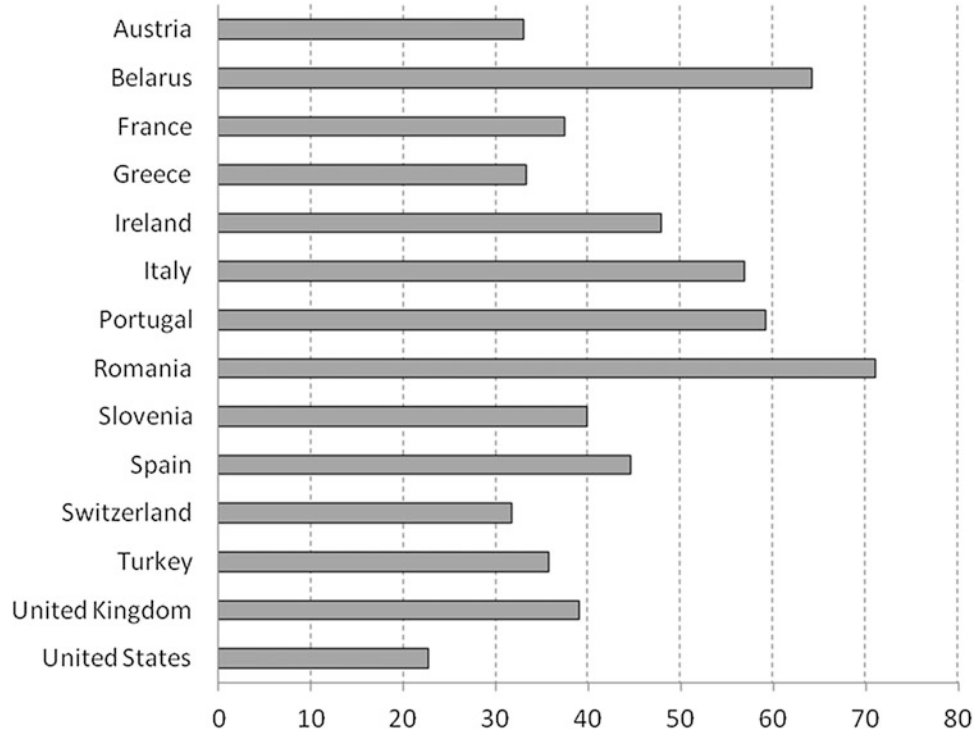

Fig. 8.3 Foreign-born persons married to natives: Europe and United States (%)
Persons in a marriage or consensual union with a co-resident spouse
Data are from the most recent sample for each country

census microdata, owing to large sample sizes and detailed relationship information on co-resident persons (Yaqub 2009). Figure 8.4 gives school attendance rates for internal migrant children by presence of relatives across developing countries on three continents. In nearly all countries, children residing without relatives are significantly disadvantaged. The ease with which the IPUMS data enables international comparisons is reflected in some large-scale profiles of child migrants (Barker et al. 2013; McKenzie 2008).

Census data are well suited to studying the relationship between education and migration. The brain drain—the flow of highly educated persons from developing to developed countries—is one of the more popular topics indicated by researchers applying for access to IPUMS. The scope of the database allows globe spanning studies (Dumont et al. 2010), and its temporal depth offers the opportunity to explore the historical trajectory of skilled worker migration (Docquier and Marfouk 2006). The data support studying internal skilled migration as well as international (Clemens 2009). Work variables offer another perspective on skilled migration and provide the opportunity to explore potential education-occupation mismatches among migrants. Employment status and industry provide further perspective on migrant outcomes relative to educational attainment. Education can also be considered within the broader context of factors affecting the propensity to migrate (Aguayo-Téllez and Martínez-Navarro 2013). By pairing data from two countries, one can consider the educational attainment of migrants in relation to the non-migrant population they left behind (Feliciano 2005). Figure 8.5 shows the proportion of Brazilian-born adults residing in various destination countries who have completed secondary education. The data suggest distinct

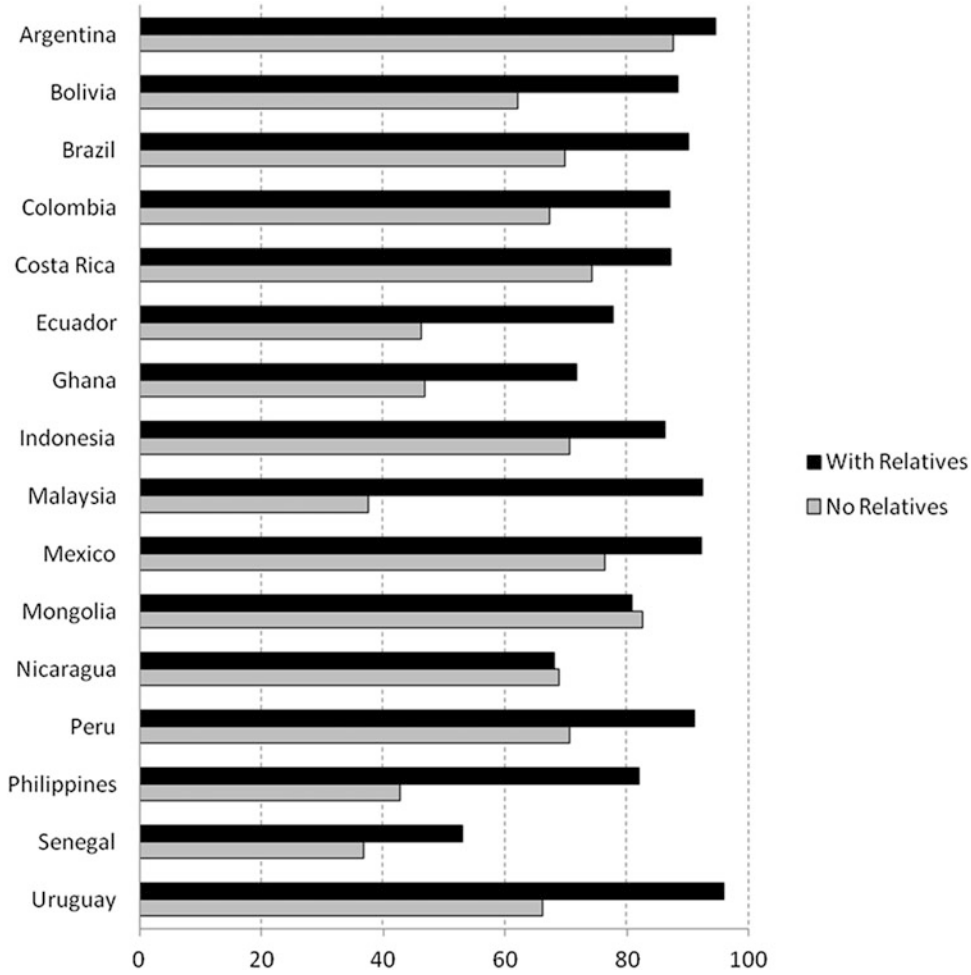

Fig. 8.4 School attendance of migrant children, by presence of relatives in the household (%)
Children age 6–15 who migrated internally within the past 5 years. Samples circa 2000

migration streams exhibiting limited selectivity with respect to distance, with internal Brazilian lifetime migrants being only modestly more educated than non-migrants. In most cases one could extend such comparisons over time using multiple censuses.

Return migration can be identified using birthplace and prior residence information, which are broadly available in the IPUMS samples. There is scope for examining the determinants of return migration, although at the individual level one cannot know the type of work people were performing in their old location (Medina and Posso 2013). The socioeconomic attainment of return migrants relative to non-movers can be assessed through their education, employment and housing characteristics (Thomas 2008, 2009; Thomas and Inkpen 2013).

Fourteen IPUMS samples, mostly from Latin America, indicate the number of household members who migrated internationally in some specified period prior to the census. Half of those samples provide individual records for each migrant, which can be linked to data extracts. As mentioned above, these records allow finer analysis of the characteristics of migrants, their reasons for migrating, and the structure and status of the sending households. To this point, the migrant records are a relatively underutilized aspect of the IPUMS data series. Unfortunately,

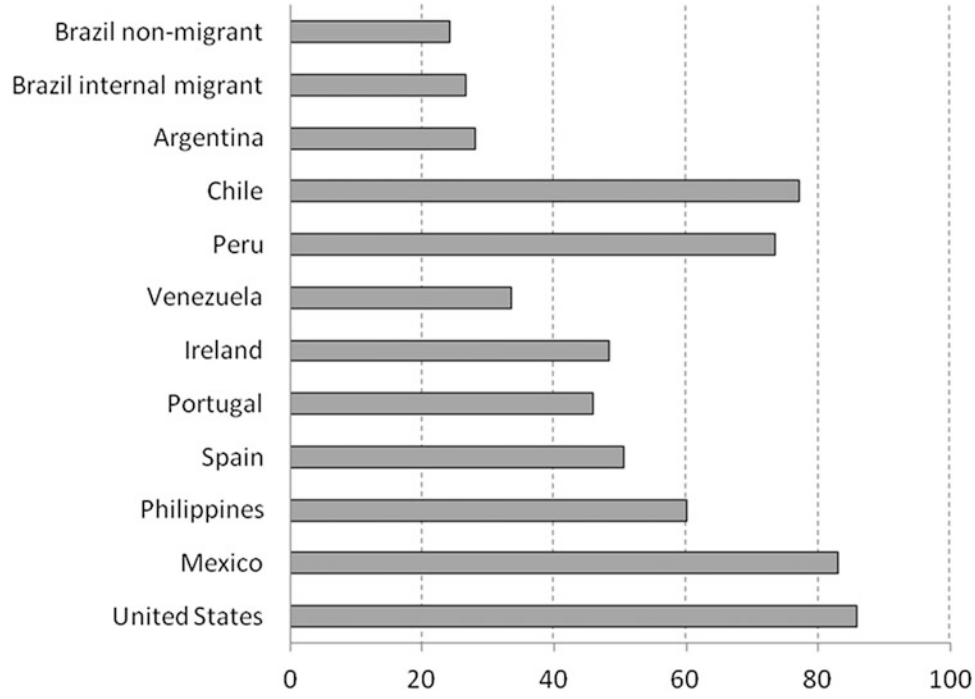

Fig. 8.5 Brazilians at home and abroad: secondary education by country of residence (%)
Persons born in Brazil, age 18+
Data are from census closest to year 2000 for each country

despite its importance in many developing countries, the receipt of remittances by a household is reported in only a few samples in Africa and Latin America.

There is some scope for using the census microdata to analyze the effect of migration on labor markets in both source and destination areas (Aydemir and Borjas 2007; Mishra 2007). This is most straightforward in the limited instances—such as Mexico and the United States—where income data are available in the census. The earnings data are also useful for analyzing push and pull factors from the perspective of potential migrants (Davila et al. 2009).

The census data can be used to develop multilevel models exploring the effect of locality on migration determinants and outcomes (Loebach and Korinek 2012; Spörlein and van Tubergen 2014). Contextual information can be calculated from the census: for example, the concentration of certain industries, housing opportunities, or immigrant groups might all be tabulated at the province or district level and used with individual-level variables to analyze migrant behavior. By bringing in outside data, the multi-level approach has been applied as far afield as assessing rainfall effects on propensity to migrate (Nawrotzki et al. 2013). In combination with other sources, IPUMS has also been used for health-related research, such as exploring the connection between migration and malaria transmission in Africa (Pindolia et al. 2013, 2014). Any merging of data sources, however, depends ultimately on harmonizing their geographies to IPUMS, which can sometimes be challenging. A new data project at the Minnesota Population Center, Terra Populus, promises to significantly reduce the barriers to combining IPUMS with environmental data in the future (Minnesota Population Center 2013).

The IPUMS data also offer great potential for overtly spatial analysis. Using GIS boundary files, researchers can calculate migration distance and direction, population density and other measures. The GIS files provided by IPUMS define areas corresponding to geography variables in the microdata—typically political units. They are not

point data. Boundary files are available at the country and the first administrative levels (e.g., states or provinces) within countries. Boundaries for the second administrative level will be added as they are processed in the future.

The majority of IPUMS migration research, including the majority of studies referenced above, is oriented to international moves. But most of the aforementioned topics can be explored in terms of internal migration. The IMAGE project (Internal Migration Around the Globe) is an ambitious effort to investigate internal migration cross-nationally at a global scale. The project makes extensive use of the IPUMS samples in its efforts to inventory the world's data and develop consistent measures of internal migration, among other goals (Bell and Muhidin 2009; Bell and Charles-Edwards 2013; Bernard et al. 2014).

The foregoing is a selective list of potential applications of the IPUMS data to migration research. IPUMS continues to expand in geographic coverage and temporal depth. This growth means new research possibilities for the database are continually arising. But even heavily mined fields of study can yield new insights using novel approaches, making fresh comparisons, or combining the census data with evidence from other sources.

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Micro Methods: Longitudinal Surveys and Analyses

9

Cris Beauchemin and Bruno Schoumaker

Introduction

Longitudinal data offer extraordinary opportunities to study the patterns, causes and consequences of both domestic and international migration. Because they follow people over time, they allow analyzing migration as a process, to describe trajectories and to show the sometimes repetitive and circular nature of migration, which is not possible with cross-sectional data. Furthermore, and very importantly, longitudinal data allow us to study migration with a life course approach, i.e., to analyze how spatial mobility interacts with all sorts of personal (e.g., family situation, economic status, etc.) or contextual (local development, ecological situation, political events) changes. Using longitudinal data allows us, for instance, to study the extent to which migration influences family changes (e.g., marriage, divorce, and fertility) and, conversely, to analyze how getting married or having a child may cause a change of residence. In other terms, when they contain temporal details on various events that occur in people's lives, longitudinal data are especially well suited for the study of the causes and consequences of migration. In particular, they allow analysts to explain migration in great detail and independently of any direct question to the migrant regarding the motives and circumstances of the move itself.

This chapter presents the main issues raised by the production and use of longitudinal data for the study of migration, the solutions adopted so far, and the problems that remain to be solved. It is informed by the experience of a number of surveys carried out in various parts of the world,[1] covering both more developed countries and less developed countries. After this introduction, the second part of the chapter is dedicated to data collection issues. It compares the advantages and drawbacks of prospective and retrospective surveys for the study of migration (i.e., panel vs. life histories), and it exposes the various techniques of data collection at all levels (from the individual to the macro-context). The third part of the chapter concerns data analysis. It firstly examines the conceptual and practical treatment of time in the management of longitudinal data. Then descriptive and causal methods of analysis are presented, with a focus on event history analyses with retrospective data (mainly life tables and discrete-time models, other techniques being however mentioned). Finally,

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[1] Note that surveillance systems, that are longitudinal by nature, are not included in this chapter. More details in Ph. Bocquier's Chap. 10.

M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_9

the fourth part concludes the chapter by pointing out new challenges for the collection and analysis of longitudinal data on migration.

Longitudinal Surveys

Prospective vs. Retrospective Data

All longitudinal surveys have a common feature: they collect time-varying data that allow us to analyze how social processes evolve over time. But they treat time in very varied ways. Some collect information on the past (so-called retrospective or biographic surveys), while others collect information as time goes by through repeated interviews with the same persons (prospective surveys, also called panels). Some surveys collect very detailed life histories, while others collect information only on a short period of time. In this section, we discuss the advantages and drawbacks of these various methods for the study of migration, paying interest to both survey practicalities (design and implementation) and analysis potentialities.

Biographic Data

The retrospective approach is deeply rooted in migration studies. The seminal book of Thomas and Znaniecki, *The Polish Peasant in Europe and America: Monograph of an immigrant group*, laid the foundations of the methodology. In the 1970s, after a period of eclipse, the biographical approach re-emerged in the form of quantitative retrospective surveys. Questionnaires were standardized and lives could be coded and statistically treated with computers. Spatial mobility appeared as a key subject of all biographic surveys that has been developed ever since. With more or less detail, all these surveys cover three aspects of lives: residential mobility, family formation (marriages, fertility), and socio-economic evolution (education, employment). As a result, collecting life histories is not only an efficient way to record and analyze complete migration trajectories, it is also a way to analyze, in a *life course approach*, how migration relates to other aspects of life (education, work, family, etc.). Biographic surveys are thus used to study the patterns of migration (description of migrants' itineraries, rates of in- and out-migration), as well as the causes and effects of migration. Analytical possibilities depend obviously on the content of the questionnaires and on the availability of contextual variables (see section "Collecting multi-level and longitudinal data to study migration"). But it also depends on the sample composition. For instance, to allow for the study of the factors or the consequences (at the individual level) of migration, survey samples must include information on both migrants and non-migrants. Interestingly, biographic data allow comparing them at the right time (e.g., just before migration, and not at the time of the survey) when the aim is to study the determinants of migration (Bilsborrow et al. 1997). While most retrospective surveys focus on domestic (internal) migration,[2] some biographic surveys were also developed to study international migration, and were thus based on transnational samples (combining surveys in both origin and destination countries in order to collect data on migrants, non-migrants and returnees).[3]

Retrospective surveys are sometimes disregarded because they inherently entail a memory bias. By nature, they consist of asking interviewees to recollect their whole life. This is obviously a complicated exercise, subject to errors, omissions and distortions. A specific body of literature was developed to assess the validity of retrospective data by comparing the information collected through several sources on the same individuals (e.g., retrospective

[2] A sample of 14 biographic surveys are fully presented in the following book: Groupe de Réflexion sur l'Approche Biographique (1999). Biographies d'enquêtes : bilan de 14 collectes biographiques, INED-PUF. Also available online (although only in French): http://grab.site.ined.fr/fr/editions_en_ligne/biographies_enquetes/

[3] The Mexican Migration Project (MMP) was the first retrospective survey dedicated to international migration and combining samples at origin and destination. It inspired several other experiences, among which: the Latin American Migration Project (LAMP) and the Migration between African and Europe Project (MAFE).

vs. administrative data, two waves of retrospective surveys on the same individuals). Their results show that the accuracy of the data varies according to the domain: dates are better reported in the family domain (marriage, births) than in residential histories (Poulain et al. 1992; Auriat 1996); and schooling dates are better reported than work periods (Freedman et al. 1988). They also depend on the respondent, with females and more educated people reporting less approximate dates (Poulain et al. 1992; Smith and Thomas 2003). As can be expected, respondents better remember recent moves, as well as those of long term and long distance (Smith and Thomas 2003). In any case and very importantly, even when events are misdated, their order is well preserved (e.g., marriage before migration, change of job afterward, etc.), and these dating errors have little impact on event history analyses of migration (Courgeau 1992). In the end, all studies related to data quality of retrospective surveys converge to conclude that biographic data are not perfect, but they are still good enough to be used in migration studies. Still, the effects of measurement errors (including underreporting of events, dating errors, misclassification of variables) on event history analyses deserves more attention, as suggested by recent research in this area (Pyy-Martikainen and Rendtel 2009; Holt et al. 2011).

Various survey instruments have been developed in order to facilitate the interviewees' precise remembrance of things past, simplify the interviewers' collection process and, in the end, improve data quality. Life history calendars (LHC), Ageven (acronym for Age-Event) grids, sequential questionnaires and matrices are practical tools that help to date the more significant events of the interviewee's life and then provide anchors to date less salient facts (Antoine et al. 1987; Freedman et al. 1988; Axinn et al. 1999; Groupe de Re′flexion sur l'Approche Biographique 1999). A decisive feature is to collect in parallel the dates related to the various domains of life (family, occupation, residence, etc.) so that the interviewee and interviewer can check sequences and spot potential inconsistencies. As with other quantitative surveys, most biographic surveys are based on very structured questionnaires. However, the nature of the data to be collected (biographies) opens the door to more flexible interviews. The MMP data, for instance, are collected by following the "ethnosurvey" methodology, in which the interviewers word the questions freely, provided that they fill in the grids of the questionnaire (Massey 1987). Other surveys are based on a combination of an introductory qualitative interview (aimed at filling a grid with the principal dates) with a structured interview (to complete a complementary questionnaire). In any case, compared to cross-sectional surveys, biographic surveys have a very specific design, with which few interviewers are familiar. For this reason, more than in any other survey, investing in an intensive training of the interviewers and in a close editing of the questionnaires are certainly key elements for collecting data of good quality.

Panel Data

As opposed to biographic surveys, prospective surveys are usually not designed to primarily study migration; most of them are dedicated to socio-economic outcomes or child development. By nature, panels are somewhat averse to the study of mobility: surveying the same persons repeatedly is obviously much easier when people do not move; otherwise they need to be traced, which may increase hugely the survey costs without insuring that all interviewees will actually be re-interviewed. Actually, the way migrants are followed up from one round to another in panel surveys is a big stake for those who intend to study migration. In the crudest approaches, mobility between rounds t and $t + 1$ can only be deduced from the fact that an individual interviewed at t could not be found at $t + 1$. This gives only a rough proxy estimate of mobility, because such sample attrition is caused not only by migration. More refined panels record information on the various sources of attrition and allow one to distinguish between mobility (domestic or international), death or field work, but they make it difficult to re-interview a person who has not

moved. Mobility estimates may thus be of better quality. In the more refined approaches, the absentees at $t + 1$ are traced either within the boundaries of the region or in the country where the panel is carried out, and even sometimes beyond the borders.[4]

Even though they are not designed to primarily study migration, panels offer interesting analytical possibilities. By comparing the absentees of $t + 1$ (some of whom are migrants) with those who could be re-interviewed in the survey area (considered as non-migrants), at least three research avenues are provided. The first is related to the measurement of out-migration outside of the survey area, a phenomenon in which data are lacking in most countries and for which panel data offer a unique opportunity. It remains that estimates of out-migration computed through panel data may suffer from a certain degree of measurement error, which depends mainly on the efforts to distinguish out-migration from the other sources of attrition.[5] Second, the comparison of the absentees/migrants and non-migrants can also allow for the study of out-migration determinants, or even return determinants if the places of origin and destination can be identified. In this case, the quality of the results depends not only on the source of attrition, but also on the set of variables that can be mobilized as explanatory variables.[6] Third, panel data can be used to study the effects of out-migration on the places of origin (where the survey is carried out), especially on the household's well-being, by comparing those who have migrants abroad and those who do not. Furthermore, tracking migrants out of the panel area (and thus collecting more precise data on them than through proxy respondents at the origin) also gives us the opportunity to study migration as a strategy for social mobility (and, more specifically, a way to get out of poverty). In any case, it allows taking into account the (often crucial) selection effect of migration when studying socio-economic outcomes.[7]

Finally, in some cases, prospective surveys can also be used to study the immigrants' adaptation process in destination areas. This is made possible when samples include enough immigrants to compare them with non-migrants (which usually require oversampling migrants) or when surveys are totally dedicated to immigrants (and/or their children). This kind of survey was first developed in the USA in the 1970s for specific groups of immigrants.[8] Nationally representative surveys multiplied in the 1990s in immigration countries (e.g., Canada, USA, Australia, New Zealand), where

[4] At least four panels can be cited for their efforts to trace migrants: the Malaysian Family Life Survey; the Mexican Family Life Survey (MxFLS), a nationally representative panel of Mexican households that traces Mexican migrants in the USA; the Kagera Health and Development Survey (Tanzania), a household panel originally bounded to the Kagera region, which traces migrants not only in the rest of Tanzania but also in the neighbouring countries; the Nang Rong Project, a panel conducted in 51 Thai villages that included two tracking rounds (in 1994 and 2000, migrants from 22 geographically dispersed villages of the original 51 villages were followed to the top 5 destinations).

[5] The British Labour Force survey, the US Current Population Survey (CPS) or the German Socio-Economic Panel (GSOEP) were used for such a purpose. For a detailed discussion on the results and measurement errors, see Mezger (2012). Essays on Migration between Senegal and Europe: Migration Attempts, Investment at Origin and Returnees' Occupational Status. PhD, University of Sussex.

[6] See, for instance: Dustmann (2003). "Return migration, wage differentials, and the optimal migration duration." European Economic Review **47**: 353–369.; Constant and Massey (2003). "Self-selection, earnings, and out-migration: A longitudinal study of immigrants to Germany." Journal of Population Economics **16**(4): 631–653. An analyses of return migration using the GSOEP, or: Rubalcava et al. (2008). "The Healthy Migrant Effect: New Findings From the Mexican Family Life Survey." American Journal of Public Health **98**(1): 78–84.

[7] See studies that used the Kagera panel. For instance:

Beegle, Kathleen, Joachim De Weerdt et Stefan Dercon (2010): "Migration and Economic Mobility in Tanzania: Evidence from a Tracking Survey". Review of Economics and Statistics.

De Weerdt, Joachim (2010): "Moving out of Poverty in Tanzania: Evidence from Kagera". Journal of Development Studies, Vol. 46(2): 331–349.

[8] See, for example, the Longitudinal Survey of Cuban and Mexican Immigrants in the US (1973–74 and 1979) or the Children of Immigrants Longitudinal Survey (CILS, 1992 and 1995–96).

it was globally recognized that information was lacking on the process of immigrant integration during the first years after arrival. Governments and academics were especially interested in measuring the impact of immigration programs.[9] By nature, cross-sectional data are clearly not suited to analyze how the socio-economic situation of migrants evolves over years, and longitudinal data were thus required. The panel approach was preferred over the retrospective one in order to take into account the possible selection effect of re-migration (return or subsequent migration to another country), since those who decide to re-migrate after immigration certainly have a different path of integration than those who stay.

Pros, Cons and Alternatives

Despite their limitations, longitudinal surveys –be they retrospective or prospective– offer much greater opportunities for analyses than cross-sectional data. Because they consist of a follow-up on interviewees over time, they allow studying migration as a process inter-related to the other aspects of the life cycle (fertility, union formation, work, etc.), without being limited to time-invariant variables. But, when thinking about designing a migration survey, how does one choose between the prospective and retrospective approaches?

Table 9.1 provides a general review of the potential advantages and drawbacks of each method. It shows that the retrospective and prospective approaches have opposed pros and cons. In practical terms, the major argument in favor of retrospective surveys is that they usually cost much less and allow the researcher to collect full histories in a continuous way, possibly in several cohorts and in just one round of surveys, while the same kind of data would take decades and frequent rounds with a panel approach. The two approaches are not irreconcilable. Actually, a large number of panels include biographic questionnaires in the first wave and retrospective questions to fill in the inter-round gaps; or they reconstruct data for gaps due to temporary dropouts. In the German socio-economic panel (GSOEP), biographic data are collected retrospectively in the first waves (Frick et al. 2007), and gaps due to temporary dropouts are filled in with retrospective data (Haisken-DeNew and Frick 2005). In the Nan Rong project in Thailand, the panel data are complemented with biographic data on specific topics that cover the 10-year periods between successive waves (Chamratrithirong and Sethaput 1997).

It remains that collecting full life histories entails a heavy survey burden (interviews are quite long, often around 60 min), and it is marred by potential recall bias. Various attempts have thus been made to simplify the collection of past events. Some consist of reducing the observation window by starting to collect lives later than at birth. A survey carried out in Ecuador, for instance, collected histories only over the 10 years preceding the survey; however, they added some questions about the previous period (Bilsborrow and Henry 2012). Another possible adjustment consists of restricting the number of domains for which events are dated. The biographic surveys of the NESMUWA project (surveys conducted in seven West African countries in the early 1990s), for instance, collected dates only for residential changes. Other events were not recorded and occupation and marital statuses were registered only at the time of arrival for each residence (Bocquier and Traoré 2000). While reducing the survey costs, such a choice makes it impossible to use these data in a life course approach.

Without collecting entire life histories, some cross-sectional surveys collect parsimonious retrospective information that is useful for migration studies. As exemplified in section "Longitudinal analyses", collecting just the date of first departure is already sufficient for carrying out a survival analysis and computing trends in

[9] For a comparative presentation of these surveys, see: Black et al. (2003). "Longitudinal Studies: An insight into current studies and the social and economic outcomes for migrants." Sussex Migration Working Paper(14): 32. Similar surveys were also carried out in France; see: http://www.immigration.gouv.fr/spip.php?page=dossiers_det_res&numrubrique=468&numarticle=2535

Table 9.1 Potential advantages and drawbacks of prospective and retrospective surveys

	Retrospective/biographic surveys	Prospective/panel surveys
Advantages	**Content**	
	Usually very rich (full life histories); less prone to left-hand censoring than panels.	Especially suited for information which can hardly be recovered retrospectively (values, norms, intentions, perceptions, detailed incomes and expenditures, community variables, etc.)
	Measures do not change over time since they are collected at once.	
	Continuous information / exhaustive recount of changes in characteristics over time (small time intervals).	No memory bias
	Sampling issues	
	No attrition.	Biases due to attrition can be controlled for (since information is available on lost interviewees).
	Permit comparison of multiple (birth) cohorts with only one survey round.	
	Practicalities	
	Relatively inexpensive data (only one survey round for full histories and several cohorts).	Long term investment with a risk of discontinuous funding.
	Data quickly available for analysis.	
	Less obtrusive than panels.	
Drawbacks	**Content**	
	Memory bias / recall errors	Measures are susceptible to change over time (variables changed or omitted from one round to another).
	Certain variables are difficult to collect retrospectively (intentions, norms, detailed household or community data).	Discontinuous information on changes: no data between two rounds, mobility may thus be underestimated (except if retrospective questions are added).
		Short periods of observation (long panels are rare).
		Left-censored data (except if retrospective questions/modules are included).
	Sampling	
	Can be representative at the time of the survey, but not completely in the past: only survivors at the time of the survey can be interviewed (neither deceased individuals nor emigrants). Usually no information to assess the potential biases. → Data useful to analyse the trajectories of the current population rather than characteristics of the past population.	Attrition especially problematic for migration studies: the more mobile interviewees are lost, except in cases of special efforts to recover information on them through proxies or to track them.
	Cohorts are not equally represented: (a) older cohorts are less representative than younger cohorts because of selective mortality; (b) life histories of younger cohorts are incomplete (earlier right censoring). The period of life cycle that is common to all cohorts is thus limited. A way to homogenize the individuals' duration of observation is to survey a specific age group (or even a set of two or three specific cohorts).	
	Often small samples collected in selected cities or communities.	
	Practicalities	
	Retrospective surveys are very demanding on interviewees (long interviews, although usually well received).	Substantial cost because of repeated field work and sample size (attrition forces augmenting the size of the initial sample). Hence, quite rare in developing countries.
	Special training needed for interviewers (specific tools that they are usually not used to).	

migration. Another method is proposed by (Bilsborrow et al. 1997) to study the determinants and effects of international migration. It consists of collecting data in the origin countries to compare migrants and non-migrants at a fixed point in the past (rather than at the time of the survey, which makes no sense to study the causes and consequences of migration). For migrants who left within the past 10 years, socio-demographic characteristics are collected –through proxy respondents– at the time of their departure. Equivalent data are collected for non-migrants 5 years before the survey, a point in time which corresponds to the average date of the migrants' departure. This method provides insights on the determinants of migration,[10] but it does not allow performing event history analyses with a life course approach.

Collecting Multi-level and Longitudinal Data to Study Migration

Collecting data on migration alone is usually not sufficient for migration studies, especially in longitudinal approaches aimed at studying the causes and consequences of migration. The theoretical literature has clearly established that migration decision-making cannot be understood at the individual level alone (Massey et al. 1993). Beyond personal determinants, migration depends on family factors and is also affected by institutional and structural factors operating at the community, regional, national and even international levels. Conversely, these different levels of the migrants' environment may also be transformed through migration, and this can only be assessed when multi-level data are collected.[11] In this section, we review four levels of information that are of special interest for longitudinal migration studies: the individual level, the interviewee's social circle, the local context (which commonly refers to the community level) and the macro-level.

Individual Level

Be they prospective or retrospective, all longitudinal surveys interested in migration obviously collect information on individual data. Most longitudinal surveys interested in migration adopt a "3B" (three biographies: residential, familial and occupational) approach (Courgeau 1985). Within this "3B" framework, the wealth of details in each domain varies greatly from one survey to the other.

Even regarding specific migration histories, survey practices may vary significantly. For a start, the definition of migration impacts the precision of the histories to be collected. Does the survey record all residence changes or only movements from one region to another? Is migration defined as a change of residence for at least 1 year, or are shorter-duration movements also recorded?[12] Answers to both of these questions highly determine the number of events to record and, by the same token, the survey burden and analytical possibilities. In addition, some surveys on international migration add specific modules to describe the experience of migration, e.g., the trajectories followed by the migrants (places of border crossing or of transit stays), and/or details on the trip's organization (Who paid? Who accompanied the migrant? What was the mean(s) of transportation? Etc.).[13]

Beyond the "3Bs", some surveys related to migration even extend the number of domains covered by their questionnaire. For instance, surveys interested in the potential investment role of migrants may add questions on asset histories (when, where and how houses, lands and/or business were acquired and –possibly– lost, such as in the Mexican Migration Project

[10] For an application of this methodology, see for instance the Push-Pull project.

[11] In practice, multi-level and longitudinal approaches of migration have been used much more commonly to study the causes of migration rather than its consequences.

[12] For a discussion on the definition of migration, see Chap. 7.

[13] See for instance the MMP and MAFE project questionnaires, both being available online: http://mafeproject.site.ined.fr/ and http://mmp.opr.princeton.edu/home-en.aspx

(MMP) or Migrations between Africa and Europe (MAFE project). Actually, specific modules can be added on any subject of interest.

The level of details of any survey depends on the research questions that motivated the survey project. It also rests on expectations regarding data quality and on practical issues. A first element to consider is: Who is interviewed? Obviously, when the data is collected through proxy respondents, the information cannot be as detailed as when migrants are traced in their changing places of residence. In this domain, it must be said that more research is needed on how far proxy respondents are able to provide answers on the life histories of their relatives. A second element to consider is the recollection capacity of the interviewees (even of their own life). In line with the observation that short periods of residence are more likely to be misreported (omitted or misdated), some authors recommend separating migration histories into two parts: short-term migration (reported only during the most recent period, e.g., 2 years) and long-term migration (for a longer period that possibly covers their whole life) (Smith and Thomas 2003). Recalling events in the past is also usually less accurate than for recent events. The recollection of events over one's entire life should be limited to important events that individuals are likely to remember. A third element to take into account is the interview duration, to which the limit is set both by budgetary constraints (interviewers' time is costly) and by interviewees' acceptance or fatigue. In a review of 14 biographic surveys, Antoine et al. (2009) report an average duration of 60 min, with much longer interviews when respondents have long and complex lives. Despite this survey burden, the same authors report that biographic surveys have no higher refusal and abandonment rates than other surveys, and that they even raise a specific interest among interviewees: recollecting their life is not a neutral exercise and some declare that they enjoy putting the pieces together. In any case, collecting life histories has to be limited in time, and survey designers have to find a trade-off between their specific objectives and practical constraints.

Social Circle

Recognizing that migration is not only an individual matter has been, in recent decades, one of the major changes in migration studies. Rather than a solitary enterprise, migration is now seen as a collective strategy (e.g., see the literature pertaining to the New Economics of Labor Migration),[14] which may benefit from the support of social networks already established at the destination and which may impact the well-being of those left behind at the origin. The interviewee's social circle (which includes his or her social networks) is thus potentially important for studying both the causes and consequences of migration. How do we take this into account in a longitudinal approach?

A first issue is to define the boundaries of the social circle of interest. Although sociodemographic studies often consider the *household* as the first interviewees' social circle, it is essential to keep in mind that this notion is intrinsically cross-sectional and thus ill-suited for longitudinal studies. A household is usually defined as a group of people who live together in the same house (and share their meal) *at the time of the survey*. As time goes on, this social entity may evolve in many varied ways: new members arrive (birth or in-migration into the household), former members move out (death or out-migration), and the whole set of persons may change their place of residence. With some years of distance, most households are just not the same. Because it refers to such a time-dependent set of persons, the notion of household should be used with great caution in longitudinal studies, if not avoided.

Another flaw of the household concept is that it is limited to co-residents, whereas the set of people who play a role in the migration decision may be much larger, much in the same way that the set of people who can contribute to the household's well-being at origin is larger.

In a longitudinal approach, the interviewee's social circle could be defined as the group of

[14] See also Taylor and Castelhano, Chap. 24, in this volume.

persons, relatives and friends who may (or may not) influence his/her mobility patterns and who may (or may not) benefit from his/her potential migration experience. Thus defined, the social circle may encompass a great number of persons. A more restrictive approach, guided by the research questions, is preferable when designing a questionnaire. Surveys interested in migration decision-making (chain migration, migrants' networks) typically refer to specific kin relationships (e.g., ascendants, descendants, siblings), which present the great advantage of being fixed over time (unlike a list of household members). For instance, the MMP survey, a major dataset used to test the role of networks among other determinants of migration, recorded dates of first migration to the US for the head's spouse, children, parents (mother and father) and siblings. Focused on international migration, the MAFE survey extended this approach in two ways: first by extending the boundaries of the social circle to also include non-kin persons that may play an important role in migration support; and second by recording all changes of country for these persons, and not only the first trip (Beauchemin 2015). Surveys interested in residential arrangements adopt a different approach: co-residence with the interviewee (at any point in time) is the main criterion for including a person as a member of the interviewee's social circle. The "*Encuesta Movilidad especial. Area metropolitana de Bogota*" provides a practical example of a questionnaire designed to collect such complex data (Dureau and Florez 2009).

Local Context

For a long time, the local context has been recognized as a potentially fundamental driver of migration, especially in socioeconomically disadvantaged areas where employment or farming opportunities are low in comparison with other places, or in social contexts where a culture of migration has developed. While intuitive, this idea has not been tested very often. Actually, it is only since the early 1980s that some authors have advocated the collection of community variables to better describe migration patterns and better explain the migration process (Findley 1982; Bilsborrow 1984; Axinn et al. 1997). While environmental migration is becoming a more and more pressing question, relatively few projects have so far incorporated this level of information in their datasets (Entwisle et al. 1998; Henry et al. 2004; Schoumaker et al. 2006; Massey et al. 2010). This might be due to the complexity of the data being collected. Linking micro data (individual histories) with local contextual data is indeed a demanding exercise that raises complicated practical and conceptual issues.

A first issue is that the contextual data need to be collected not only in a time-varying way, but also in a multi-located manner that goes beyond the areas covered by the individual-survey. The information must be time-varying because, as do people, communities change over time. Let us suppose that an individual has never migrated. It remains that his/her place of residence may have changed (e.g., growing population size, new amenities, changing activities, etc.). This changing context may affect his/her propensity to out-migrate and should thus be captured in the data. The information also has to be widely multi-located in order to describe all the places where the interviewees used to live and not only the place where they live at the time of the survey. Otherwise, it would not be possible to properly assess their propensity to migrate as a function of the context where they lived at any point in time (except if there are no migrants in the surveyed population). This necessity to expand the fieldwork to previous places of residence may complicate significantly the fieldwork and augment significantly the survey costs (Axinn et al. 1997; Schoumaker et al. 2006). It certainly explains why such surveys are so rare.

A second issue attached to the local context is related to the geographic meaning of "local". What is the relevant scale for apprehending the potential effects of the local context on migratory behaviors? Even though the "community" or the "neighborhood" are commonly used as spaces of references, most authors agree on the fact that data collection should not be limited to these spaces, and they also suggest covering their surroundings (Findley 1982; Axinn et al. 1997; Schoumaker et al. 2006). As a practicality, the

boundaries in community surveys are usually set by the interviewees themselves when they are asked, for instance, to locate the nearest school (or any other amenity or infrastructure), be it within the locality or outside. Researchers themselves have to set the boundaries when they use a Geographic information system (GIS) to derive their contextual data. Sticking to administrative boundaries has some advantages (especially for collecting data through registers and other administrative channels), but it may lead to inconclusive results when the administrative entities do not correspond to the right scale for studying migration. This boundary issue is especially sensitive in urban areas, where the places of reference may vary greatly from one inhabitant to the other (some people are very sedentary and do not travel outside of their housing's immediate surroundings, while others take advantage of the whole town or city). Defining the right scale for collecting contextual data depends finally on the type of variable to be collected (some are relevant at the level of a village, but meaningless at the city level). Conversely, this implies that community data must be collected on a set of quite homogeneous places, in which all variables of interest make sense.[15] This requirement is, however, complicated by the fact that places change over time and that a set of homogeneous places at the time of data collection may be very heterogeneous in the past.

At least three types of sources can be used to generate contextual data at the local level. Respondents themselves are a first source. They can provide contextual information either directly or indirectly. Directly because questionnaires can include questions to characterize the places where the interviewee lives and lived in the past. This option allows data to be obtained regarding places that are dispersed economically, provided that respondents are able to provide accurate information. Indirectly, answers to micro-surveys can also be used to generate aggregated contextual variables at the local level. However, such a method raises a problem of representativeness. Most places where the interviewees lived in the past are likely to be cited a very small number of times in the whole dataset, such that it is not possible to compute aggregated yearly estimates for them. This method was used, for instance, with the MMP data to calculate a longitudinal indicator of community "migration prevalence", which led to the "cumulative causation" theory[16] (Fussell and Massey 2004).

A second option consists of gathering contextual information from existing sources such as: administrative registers, remote sensing data (through GIS) or existing demographic sources (surveys, census). Using data already collected looks like an economical option; however, it may be more complicated than expected. First, given the requirements, i.e., retrospective information (usually at least on a yearly basis) on all places where the respondents of the micro-survey once lived, such data are rarely available. Even finding data as simple as the population size of each settlement cited in a biographic survey at the time when respondents were living there is just an impossible task in some countries where census data are not carried out on a regular basis (Dureau et al. 2009). In some contexts, remote sensing data are just not available because the regions are constantly too cloudy (Bilsborrow and Henry 2012). In any case, digging into existing data to search for what is available implies costs that should not be underestimated. Second, the external data (when available) usually require some treatment to adjust them to the micro-data. This is the case, for instance, when the external sources are not available on the same time scale as the micro-data (e.g., census data

[15] For instance, in the EMIUB community survey, data were collected with exactly the same questionnaire in all places. This made sense almost everywhere (villages, small and intermediate towns), but not in the two cities where most questions were meaningless. See Schoumaker et al. (2006: 77–106).

[16] Note that this indicator only applies to the surveyed communities and not to those where the respondents once lived, and thus rests on the hypothesis that individuals were immobile within Mexico before their potential move to the US.

available every decade while the micro-data are yearly based). More importantly, matching the contextual and individual data might be a very demanding exercise, because not all sources refer to places in the same way (postal addresses, administrative codes, geographical coordinates, names with potentially various spellings, etc.). This problem is further complicated by the longitudinal approach in cases where boundaries change over time (e.g., villages absorbed by a growing city).

The third source refers to specific community surveys designed and organized to collect contextual longitudinal information. This option is potentially costly in terms of money and organization, since it extends the survey field beyond the places where the individuals (and households) are surveyed, since information is also sought for the places where the respondents once lived. But it has the advantage of providing the desired data, including on topics that are not tackled by other sources (land-related issues, conflicts, etc.). Previous experience shows that this is feasible within a relatively short timeframe and at reasonable expense (Axinn et al. 1997; Schoumaker et al. 2006). Survey techniques have been developed to allow for the collection of reliable retrospective data. Village (or neighborhood) calendars are used to help the process of recollection, in conjunction with the accompanying questionnaires in which the questions are worded and answers recorded. To improve data quality, survey designers usually adopt a multiple-respondent approach (consisting of interviewing several people with various profiles, either at the same time or separately).

All these sources of contextual information are complementary: each provides a specific set of variables, and when they overlap it allows testing of data reliability. Even though all options do not entail the same costs, it remains essential to anticipate the collection of contextual data when designing micro surveys. Part of this anticipation effort must target the method of recording (both in the questionnaires and datasets) as precisely as possible the places where the respondents currently live and –importantly– lived in the past. Otherwise, merging micro and contextual data could be simply impossible.

Macro Context

Last, but not least among all levels expected to influence the propensity for migrating, we have the variables related to the macro context. This is especially pertinent to the economic situation and the policy context at the country-level, or even on a more global scale. At stake is, for instance, the possibility of assessing the impact of migration policies on the propensity to out-migrate and/or to return to origin. While longitudinal approaches theoretically allow for assessing the influence that policy and economic changes have on mobility patterns, there are so far few research papers that combine macro with micro longitudinal data.[17] A basic reason for this gap is the lack of appropriate data. This lack of a longitudinal contextual database is especially striking in the domain of immigration policies, where the constitution of longitudinal databases (with yearly retrospective information) is still in its infancy, with only on-going pilot experiences at the time of writing this chapter.[18] The highly complex nature of the data to collect explains that such databases are not ready: in most destination countries, immigration law constantly evolves in the sense that it multiplies specific entry tracks and creates exceptions to certain cases. The databases being prepared will provide very detailed information on the legal context of migration over recent decades. Using them will involve computing aggregated indicators (for instance, regarding the degree of policy stringency). However, first analyses suggest that this aggregation process is not straightforward and can lead to very different outcomes, depending on which precise variables are used (Mezger

[17] Good examples of papers using macro contextual variables in a longitudinal approach are Massey et al. (1997: 939–999) and Schoumaker et al. (2010: 150–171).

[18] At least three initiatives can be cited: the DEMIG project (Determinants of International Migration), the IMPALA project (International Migration Policy and Law Analysis) and the ImPol (Immigration Policies) database (Gonzalez-Ferrer and Mezger 2013).

2012). This underscores the fact that macro-contextual variables are sometimes black boxes whose results may be difficult to interpret.

More often than not, research addressing the question of the structural factors of migration has so far relied on rough indicators. In the absence of other relevant time-varying contextual data, there are two options. First, period variables are commonly introduced in models to assess the effects of the economic and/or political situation. This is easier and more convincing in cases where there is a clear-cut time threshold, e.g., before/after the implementation of structural adjustment plans in developing countries (Beauchemin 2006; Massey and Capoferro 2006), or in periods which implement specific measures, such as amnesty programs for undocumented migrants. Second, some large longitudinal datasets can be used to compute aggregated contextual variables that do not exist in official databases. MMP data could, for instance, be used to compute time-varying variables on visa availability or probabilities of apprehension (Massey and Espinosa 1997).

Longitudinal Analyses

Analyzing longitudinal data on migration requires using specific methods. In Table 9.2, we make a broad distinction between different categories of analyses of longitudinal migration data: descriptive analyses vs. causal analyses; migration as a *dependent variable* vs. as an *independent variable*; migrations as separate events (an "event oriented" approach [Billari 2001]) vs. as a set of connected events (e.g., a route, a "career" [Taris 2000]). The combination of these categories shows the diversity of questions that can be addressed with a few types of longitudinal methods (life tables and Kaplan Meier estimates, event history models, and sequence analyses).

In this portion of the chapter, we concentrate on event history analysis,[19] which is about describing and explaining the occurrence and the timing of events (Singer and Willett 2003; Allison 2010). Several methods can be used to do this. Some methods are essentially descriptive, while others have an explanatory orientation. Some treat time as continuous, others as discrete. Finally, some are parametric, non-parametric or semi-parametric (Allison 2010). Several excellent textbooks present diverse sets of methods and examples with various types of data (Yamaguchi 1991; Singer and Willett 2003; Blossfeld et al. 2007; Allison 2010). We focus on one descriptive method (life tables), and on discrete-time event history models. In most examples, migration is treated as the dependent variable, with the *Enquête dynamique migratoire, insertion urbaine et environment* [migration dynamics, urban integration and environment] (EMIUB) survey (a biographic survey on migration conducted in 2000 in Burkina Faso[20]) serving as the main data source. The first section is dedicated to conceptual issues and data structure and the second deals with descriptive methods of analysis, while the last one is dedicated to discrete-time event history models.

Dealing with Time: Data Structure and Conceptual Issues

Time is central in longitudinal analysis, which implies that data files are specifically organized in ways that are different from cross-sectional data. Understanding data structure is a fundamental preliminary to analysis.

Data Files and Data Organization

A data file for event history analyses may take various forms. In all cases, the data structure allows following people over time.

[19] Also called survival analysis, duration analysis, and transition analysis.

[20] For a complete description of the EMIUB survey, see Poirier et al. (2001): 289–309. A short description in English is provided in Beauchemin and Schoumaker (2005). "Migration to Cities in Burkina Faso: Does the Level of Development in Sending Areas Matter?" World Development **33**(7): 1129–1152.

Table 9.2 Examples of analyses of migration history data and methods used

Descriptive or causal	Migration as a dependent or independent variable	Event-oriented approach	Connected events (routes, careers)
Descriptive	**Dependent**	Description of probabilities of migration by age, year, etc. *Life tables, Kaplan-Meier estimates, event history models*	Description of migration routes, of migration careers *Sequence analysis and optimal matching*
Causal	**Dependent**	Measurement of the effects of individual, network, community and macro level variables (time constant or time varying) on the likelihood of migration *Event history models – migration as the dependent variable*	Measurement of the links between individuals, family, community and macro level variables and migration routes *Sequence analyses of routes and multinomial logistic regression with sequences as the dependent variable*
Causal	**Independent**	Measurement of the influence of a migration on another event (e.g., divorce) *Event history models – migration or migrant status as an independent variable*	Migration route as an explanatory variable of other behavior *Event history models – Complexity of migration route as an explanatory variable of return migration*
Causal or descriptive	**Dependent and independent**	Migration as a response to other people's migrations *Event history models – migration as the dependent variable, and migration of friends and kinas explanatory variables* Migration as a result of previous migrations *Event history models – migration as the dependent variable, previous migration as explanatory variables*	Parallel migration careers of related people *Description of migration careers of family members*
Text in Italic in the white cells indicates examples of methods used with longitudinal data corresponding to a combination of the different types of analyses.			

Table 9.3 shows the typical format of a person-period data file. The table is an excerpt of the EMIUB survey that illustrates the migration histories of 7 people (out of 8,644 interviewees). The file contains several lines per individual, with each line corresponding to a period of time and housing (a change of housing for a period of at least 3 months was considered as a change of residence). In the EMIUB survey, migration histories were collected from the age of 6, among people aged 15–64 at the time of the survey. Observations in the file thus start at age 6 and stop at the time of the survey (2000). The legend at the bottom of the table details the histories of each individual.

A specific terminology applies to longitudinal data and analysis. Event history data consist of a series of *events* that people have experienced during a period of time. These events are *transitions* between *states*. The time spent in a

Table 9.3 Examples of migration history data – EMIUB survey

ID	Spell	Gender	Birth date	Start of spell	Locality code	Place of residence	Region	Date of interview
1	1	male	7/1976	7/1982	2370108	Rural	Centre	4/6/2000
1	2	male	7/1976	10/1988	1370101	Rural	Centre	4/6/2000
1	3	male	7/1976	9/1994	1110401	Urban	Ouagadougou	4/6/2000
2	1	female	1/1977	1/1983	2020515	Rural	Centre	5/6/2000
2	2	female	1/1977	9/1996	1110401	Urban	Ouagadougou	5/6/2000
3	1	male	3/1960	3/1966	9070000	.	Abroad	4/6/2000
3	2	male	3/1960	6/1999	1110401	Urban	Ouagadougou	4/6/2000
4	1	male	6/1962	6/1968	1110402	Urban	Ouagadougou	5/6/2000
4	2	male	6/1962	9/1969	2300708	Rural	Centre	5/6/2000
4	3	male	6/1962	7/1977	2170299	Rural	Centre	5/6/2000
4	4	male	6/1962	8/1979	1100217	Urban	Bobo Dioulasso	5/6/2000
4	5	male	6/1962	7/1980	1041005	Rural	Centre	5/6/2000
4	6	male	6/1962	5/1985	1110402	Urban	Ouagadougou	5/6/2000
4	7	male	6/1962	2/1986	1110402	Urban	Ouagadougou	5/6/2000
4	8	male	6/1962	11/1987	1110416	Urban	Ouagadougou	5/6/2000
4	9	male	6/1962	3/1998	1110401	Urban	Ouagadougou	5/6/2000
5	1	female	9/1977	9/1983	1110401	Urban	Ouagadougou	5/6/2000
6	1	male	12/1983	6/1989	2240162	Rural	Sahel	27/3/2000
7	1	female	5/1976	6/1982	2240148	Rural	Sahel	27/3/2000
7	2	female	8/1976	12/1989	2240154	Rural	Sahel	27/3/2000

Legend

1. The first person (id=1) was born in July 1976, and interviewed on June 4, 2000. He lived in three different places (states), and made two migrations (events). The migration history starts when he was aged 6, in July 1982. At that time, he was living in a rural place in the Centre region (with locality code 2370108). In October 1988, he moved to another rural place in the same region. In September 1994, he moved to Ouagadougou, the capital city of Burkina Faso. He stayed there until the time of the survey.
2. The second person, a woman born in January 1977, migrated from a rural place in the Centre region to Ouagadougou in September 1996, and lived in Ouagadougou until the time of the survey (June 2000).
3.The third person was born in March 1960, and was living abroad at the age of 6. He moved to Ouagadougou in June 1999.
4. The fourth person has a very long migration history, with 9 spells of residence. He was born in 1962, and was living in Ouagadougou at the age of 6. He moved to a rural place in the Centre region in 1969 and stayed there until July 1977, then moved to another village in the same region, before going to Bobo Dioulasso in August 1979. He moved again to a rural place in the Centre in 1980, and then went to Ouagadougou in 1985. He moved four times in Ouagadougou and was still living there at the time of the survey (June 2000).
5. The fifth person, in contrast, has a very simple history. From the beginning of her migration history at the age of 6 (September 1983) until June 2000, she lived in the same house in Ouagadougou.
6. The sixth person also lived all his life in the same place in rural Sahel.
7. The seventh person made one migration in December 1989, but stayed in rural Sahel.

state is called a *spell* or an *episode* (Taris 2000). In Table 9.3, each place of residence is a state. And each change of residence is a transition that constitutes a possible event of interest (i.e., a migration).

For multivariate analyses, data files are usually more complex because they also include time-changing information related to domains other than residence, typically different states in occupation (e.g., work status at each point in time, i.e., unemployed, at work, retired, etc.) and/or family situation (e.g., married or not, number of children, etc. at each point in time). In Table 9.3, the lines represent periods of varying lengths: each line corresponds to a period during which variables are constant. An

Table 9.4 Example of person-period data for discrete-time event history models – EMIUB survey

ID	Gender	Birth date	Beginning of interval	Age	Place of residence	Region	Migration	Number of years of schooling
1	male	7/1976	7/1982	6	Rural	Centre	0	0–6 years
1	male	7/1976	10/1982	6	Rural	Centre	0	0–6 years
1	male	7/1976	1/1983	6	Rural	Centre	0	0–6 years
1	male	7/1976	4/1983	6	Rural	Centre	0	0–6 years
1	male	7/1976	7/1983	7	Rural	Centre	0	0–6 years
1	male	7/1976	10/1983	7	Rural	Centre	0	0–6 years
...								
1	male	7/1976	4/1988	11	Rural	Centre	0	0–6 years
1	male	7/1976	7/1988	12	Rural	Centre	0	0–6 years
1	male	7/1976	10/1988	12	Rural	Centre	0	7–13 years
1	male	7/1976	1/1989	12	Rural	Centre	0	7–13 years
...								
1	male	7/1976	1/1994	17	Rural	Centre	0	7–13 years
1	male	7/1976	4/1994	17	Rural	Centre	0	7–13 years
1	male	7/1976	7/1994	18	Rural	Centre	1	7–13 years

Table 9.5 Examples of migration data for descriptive analyses – EMIUB survey

ID	Gender	Birth date	Date at 6th anniversary	Place of residence	Region	Date of first migration to city	Date of interview	Migration	Age at migration to a city or censoring
1	male	7/1976	7/1982	Rural	Centre	9/1994	4/6/2000	1	18
2	female	1/1977	1/1983	Rural	Centre	9/1996	5/6/2000	1	19
6	male	12/1983	6/1989	Rural	Centre	.	27/3/2000	0	16
7	female	5/1976	6/1982	Rural	Sahel	.	27/3/2000	0	23

alternative is to organize the data in files where the lines represent periods of identical lengths, as exemplified in Table 9.4, where each line represents a 3-month period (here, only a part of the history of individual number 1 from Table 9.3). This type of file, suited to discrete-time analysis, is much longer, but it allows organizing independent time-varying variables in a clear way: every variable can change at each line, independently from the other variables (e.g., age and number of years of schooling in Table 9.4).

For descriptive analyses aimed at computing the probability that an event occurs over time (with Kaplan Meier or life table estimates), simpler and shorter files are sufficient, as exemplified in Table 9.5 (based on a selection of individuals from Table 9.3). Here, the event of interest is a migration from a rural place to a city (Ouagadougou or Bobo-Dioulasso). Each line corresponds to an individual at risk of making such a move. To compute simple probabilities, only two variables are required: (1) a dummy variable that indicates whether the event of interest occurred or not (here, the migration variable takes the value 1 when the individual moved to a city, see Table 9.3); and (2) a "clock" variable that measures the duration, since the individual is at risk of experiencing the event (here the age, in the last column). Other variables (that do not vary over time) can also be included.

Constructing the data file adapted to the specific research question and the appropriate method is thus an integral part of event history

analysis. This usually involves merging data files from different event histories (e.g., migration histories, birth histories, employment histories), splitting some episodes into smaller spells, selecting the appropriate event, preparing variables with appropriate time lags, etc. The detailed discussion of the challenges and techniques for organizing the data are beyond the scope of this chapter. Several textbooks provide guidelines on how to deal with common issues (see, for instance, Singer and Willett (2003) and Allison (2010), and some statistical software packages offer powerful tools to manipulate complex event history data files (for instance, the *st* commands in *Stata*).

Time of Exposure

A fundamental issue when analyzing longitudinal data is to clearly identify the period of observation, i.e., the period during which individuals are at risk of experiencing the event of interest. This section shows that defining the beginning of time (or time origin) and the end of observation is not always straightforward and that it requires special care.

Beginning of Time

In simple terms, the beginning of time is the time at which an individual becomes at risk of experiencing an event of interest. While in some cases the beginning of time is obvious, this is not always true (Allison 2010). Why does it matter? Knowing the beginning of time is important for measuring how the risk of experiencing an event changes over time. For instance, the risk of migrating is often much higher when individuals are young adults than at older ages. Measuring the changes in the risks according to the duration is often interesting in its own right. But it is also important to control for the duration in multivariate models. Since the duration in a state is often correlated with other variables, not controlling for duration in multivariate models may lead to biases.

Table 9.6 shows that the definition of the beginning of time varies with the event of interest. The first case is a basic example where international migration is the event of interest and observation starts at birth. In the second case, individuals are at risk of returning to their origin country only after their first migration out of their origin country. Similarly, the beginning of time for a second departure (repeated migration) would be the date of the first return. When events are repeatable, as is the case for migrations, the duration is often measured from the previous event. The beginning of time can also be set at an age threshold, either because of data collection constraints (e.g., age 6 in case 3 corresponds to the age from which migration histories were collected in the EMIUB survey), or for theoretical reasons (e.g., age 18 would be justified to study adult migration).

There are, however, situations where defining the beginning of time is problematic, because it is different for different groups of interest in the analysis. For instance, if we want to compare the speed at which migrants find their first employment in their destination area (e.g., in a city or in a destination country) compared to non-migrants, there is no simple definition of the beginning of time that works for both migrants and non-migrants. For migrants, a logical beginning of time is the date of arrival in the city. But for non-migrants, the time of "arrival" corresponds to their birth. Conversely, a given age (e.g., 15) may be considered as the beginning of time for all people, but since some migrants arrive in the cities after age 15, they were not at risk of obtaining a job in the city from the beginning of time. In that case, we may consider 15 as the beginning of time, and have a situation of late entry (Guo 1993): people become at risk of getting a job in the city only after arriving. The duration of residence can be included as an additional clock. The solutions that have been adopted vary across authors (Bocquier and Le Grand 1998; Zourkaleini and Piché 2007). As shown in the next section, there are also situations where the beginning of time is simply unknown.

Censoring

Censoring occurs when the event time is not known (Singer and Willett 2003, p. 316). A very common issue, especially with retrospective data, is *right-censoring*. Suppose we are

Table 9.6 Examples of events, beginnings of time and sources of right-censoring

	Type of data	Event	Beginning of time at risk	Right censoring
1	Retrospective migration history	First internal migration	Birth	Survey date
2	Retrospective migration history	Return migration from abroad	First migration out of the origin country	Survey date
3	Retrospective migration history	First domestic migration from rural areas to cities	Age 6	Survey date
				Migration to another urban area or international migration
				Reclassification of the place of residence from a village to an urban locality
4	Panel data	Secondary migration of an immigrant (return at origin or migration to another country)	Arrival in a country	Last round, death, refusal, not found

interested in people's age at first internal migration in Burkina Faso, using data as described in Table 9.3. For people who migrated at least once, the age at first migration is easily computed by subtracting the date of birth from the date of first migration. The first person in Table 9.3 migrated for the first time at the age of 12 (in October 1988). However, some people may have not yet migrated at the time of the survey (the fifth and sixth individuals in Table 9.3), and their age at first migration is thus unknown. They may migrate later, but they may also never migrate in their entire lives. The only information we have is that their age at first migration is greater than their age at the time of the survey (22 and 16 years in this example). This is a typical right-censored observation caused by the time of survey (cases 1–3 in Table 9.6).

Depending on the event of interest, right-censoring can also have other sources. Suppose we are interested in the first adult domestic migration from rural areas to cities (case 1 in Table 9.6). Some people will experience the event (a migration from a village to a city) before the survey, some will stay in rural areas between age 6 and the time of the survey (censored cases), and some will experience a competing event, i.e., an event that removes them from the population at risk of experiencing the event (Singer and Willett 2003). If some people move from a rural place to a town (not a city) or a foreign country, they are no longer at risk of performing a migration from rural areas to a city. Furthermore, someone may live in a rural area that becomes, at some point in time, an urban place (e.g., due to rapid growth or to absorption by a neighboring town). That person is no longer at risk of moving from a rural area since his/her place of residence is no longer a village (Dureau et al. 2009). In prospective surveys (panel data), refusal to continue to participate in a study, death and migration are common causes of right-censoring (case 4 in Table 9.6).

Event history models are well suited for the analyses of right-censored data, and this is one of their strengths. Event history analyses essentially consist of modeling the risk of occurrence of events at each duration since the origin. In doing so, the information of both censored and non-censored cases is taken into account. A classical assumption in event history analyses is that of non-informative censoring, i.e., that there is conditional independence between censoring time and the time at which the event occurs. In other words, we assume that the portions of event histories that are not observed beyond time T because of censoring would have been similar to those that were observed beyond that same time T among people with the same observed characteristics (Singer and Willett 2003). In contrast, informative censoring refers to situations when censoring is not independent on the event. There is unfortunately no simple solution to informative censoring (Singer and Willett

2003). A general recommendation is to include covariates that may affect censoring in the models (Allison 2010), and to evaluate the possible direction of the possible biases.

The discussion above is the most common censoring issue in retrospective migration histories, that of right-censoring. Another potential censoring issue, which is more common with panel data, is *left-censoring*. It occurs when the beginning of time is not precisely known. That is, we know that a person is at risk of experiencing an event, but we do not know from what point. This would be exemplified in a case similar to case 4 in Table 9.6, but with no available variable on the date of arrival.[21] As a result, the duration the individual spent in a state is not known. If the likelihood of the event does not depend on time, this is not a problem. If the event depends on the duration since the beginning of time, ignoring the time dimension may lead to biases. In some cases, a proxy may be used for the beginning of time, or a crude approximation for the duration can be used,[22] but this will not entirely solve the problem (Allison 2010).

A distinct situation is that of *left truncation* (Cleves et al. 2004). Here, the beginning of time is known, but a portion of the event history between the beginning of time and the start of the observation is not available. Some information on independent variables is thus missing between the beginning of time at risk and the entry into observation. This is a situation of delayed entry that is relatively easy to deal with if we assume independence between the event time and entry time (Guo 1993; Blossfeld et al. 2007). In discrete-time event history models, the person-periods before the start of the observation period are simply removed from the data file.

[21] This is sometimes called left-censoring, but the term left-censoring also has a different meaning (Allison 2010).

[22] For instance, it may be possible to know if someone arrived before or after some event or the implementation of some policy (e.g., because he/she needed a visa, or some other indicator). A crude approximation of the duration variable may be derived from such information.

Other Time Issues

Repeated or Single Events

Migration is a repeatable event. As shown in migration histories in Table 9.3, some people may experience many migrations. Describing migrations and looking for their determinants require deciding whether one focuses on a single event (e.g., first migration), or on several or all migrations. Including several events from the same person in the models may be justified, and is sometimes done for increasing sample size and for efficiency (Allison 2010). This should depend on theoretical justifications, since different events may be different from the determinants of subsequent migrations, especially in the context of international migration (Vause 2012). The first migration may depend to a larger extent on the social circle at destination than on subsequent migrations; in addition, having performed a first migration may facilitate further moves. Analyzing the events separately, or including interactions between the rank of the event and some explanatory variables may be necessary if all the events are pooled together.

Another issue with repeated events is that of the correlation of events. Including several events from the same person in the analyses means that these events are not independent from each other, and standard errors of the regression coefficients tend to be underestimated with standard methods (Allison 2010). Statistical approaches provide solutions for taking into account correlations across multiple events.

Time-Fixed Variables, Time-Varying Variables and Time Lags

Two types of explanatory variables are usually distinguished in event history analyses: those that are fixed, and those that change over time. Variables such as gender, generation, and place of birth – which are "given" at birth – are typical *time-fixed variables*. Time-fixed variables are not necessarily constant throughout the life of individuals; they just need to be constant from the beginning of time in the model. For instance, a variable indicating whether the individual had

Table 9.7 Results of discrete time event history models – EMIUB survey

	Model 1	Model 2		Model 3	
Variables	Coefficients	Coefficients	Odds ratios	Coefficients	Odds ratios
Constant	−13.48***	−13.35***	-	−12.53***	-
Age	−0.23***	−0.24***	0.79***	−0.24***	0.82***
Log(age)	3.93***	3.96***	5.27***	3.21***	24.7***
Gender					
Males		(REF)	1.00	(REF)	1.00
Females		−0.40***	0.67***	−0.08***	0.93
Years of education					
No				(REF)	1.00
1–6				1.25***	3.50***
7–13				2.37***	10.64***
14 and over				3.36***	28.76***

Source of data: EMIUB Survey (2000).
Statistical significance: *p<0.1; ** p<0.05 *** p<0.01

ever been to school by age 15 would be fixed if one looks at the determinants of migration after age 15. An easy mistake, however, is to include an explanatory variable that can vary after the beginning of time as a fixed variable in the model. For instance, taking the value of the variable at the time of the survey (e.g., number of years of education) to explain the first migration is not appropriate: the number of years of education at the time of the survey can depend on migration, and as a result cannot be used as an explanatory variable. Instead, the number of years of education should be a time-varying variable that indicates, for each time period, how many years of education each individual has completed (or started). The example in Table 9.7 will illustrate that.

Time-varying variables can represent changing states (such as the number of years of education, see Table 9.4), but they can also indicate the occurrence of a personal or contextual event that may influence the occurrence of another event (e.g., becoming unemployed or being exposed to a drought or a political event may influence the odds of migrating). One issue here is to consider the correct time-lag. Since a cause precedes an effect, some time must pass between the cause and the effect (Blossfeld et al. 2007). First, individuals do not respond instantaneously to a change. Events such as migration – and especially international migration – may (even probably) need some preparation time. It may also take some time for people to realize that the economic and political conditions have changed, and that the situation will not improve after a crisis (Schoumaker et al. 2010). As a result, it may be necessary to consider that a variable influences the migration behavior 1 or 2 years later, or over several years with varying intensity.

Another reason to include variables with a time lag is to avoid endogeneity. With individual variables in discrete-time event history models, it is common practice to measure the explanatory variables in the preceding period (e.g., preceding year or preceding three-month period). Otherwise, some events or statuses that are used as explanatory variables could actually have been caused by the event that is being studied. For instance, the residential status (living alone, cohabiting, etc.) may change in the same year as the migration. In order to use the residential status to explain the risk of moving, it will be measured in the preceding period.

Descriptive Methods

Descriptive methods are a key part of longitudinal analyses. Beyond the computation of simple indicators, descriptive analyses of longitudinal data are very useful for checking that nothing went wrong in the data preparation stage. Descriptive methods applied to longitudinal data fall into two main categories, those

consisting of describing trajectories or careers (sequence analyses) and those consisting of studying the changing probability that an event occurs over time (as part of the so-called event history analyses).[23] Among the latter, two types of approaches are used: (1) life tables with discrete time data (typically information collected at the year level); (2) and Kaplan Meier methods with continuous time data (note that data collected at the month level or at greater refinement are commonly considered as continuous). An excellent exposition of descriptive analyses of event history data is provided by Singer and Willett (2003). In this section, we simply illustrate the life table estimates with migration data.

Using data from the EMIUB survey, we concentrate on the first migration after age 6 from rural areas to either of the two cities of Burkina Faso (Ouagadougou and Bobo Dioulasso, case 3 in Table 9.6).[24] Only people at risk of experiencing the event (people living in rural areas at the age of 6) are included in the data file (Table 9.5). As a result, individual 3 (abroad at age 6, Table 9.3), and individuals 4 and 5 (in Ouagadougou at age 6, Table 9.3) are not included in the risk set. For each individual, the beginning of time is the date at which the individual turns 6, and the date of the first migration to one of the two cities is the date of the event of interest. People who were still living in rural areas at the time of the survey are censored (e.g., individuals 6 and 7). The migration variable is equal to 1 for people who experienced the event, and 0 for censored cases. The duration variable is computed as the age completed at migration or at the time of the survey (for censored cases). Even though the beginning of time was set at age 6, we use the age at first migration (instead of number of years since age 6) for convenience of interpretation.

The life table approach consists of measuring the risk of experiencing the event (migration from a village to a city) among people who were still at risk of experiencing the event at each age (or, more generally, each duration). The hazard is computed as the ratio of the number of events during the interval, divided by the total exposure time. This is approximated in the following way (Allison 2010):

$$h_j = \frac{e_j}{b_j\left(n_j - \frac{e_j}{2} - \frac{w_j}{2}\right)} \tag{9.1}$$

where h_j is the hazard for interval j, e_j, is the number of events during the interval, b_j is the width of the interval, w_j is the number of censored cases, and n_j is the number of individuals at risk of experiencing the event during the interval j, i.e., those that had not experienced it before and that were still under observation (Allison 2010, p. 54). Another commonly reported measure is the conditional probability of failure, which measures the probability that someone experiences the event during interval j, a condition of having reached the start of the interval (Allison 2010).

$$\boldsymbol{q_j} = \frac{\boldsymbol{e_j}}{\boldsymbol{n_j} - \frac{w_j}{2}} \tag{9.2}$$

The survival probabilities are computed using the conditional probabilities in the following way (Allison 2010, p. 54):

$$\widehat{S}_j = \prod_{i=1}^{j-1}(1 - q_i) \tag{9.3}$$

Figure 9.1 shows the survival curve, representing the percentage of people living in rural areas at age 6 that had not yet experienced the event at each age. As is clear from this figure, a large share of the rural population in Burkina Faso never moves to the cities: by the age of 60, 93 % of the population has not moved from a rural area to a city for at least 1 year. The hazard (Fig. 9.2) provides supplementary information: it shows how the chance of first migration from rural areas to cities changes with age

[23] Longitudinal data can also be used in other sorts of descriptive analyses, consisting for example of comparing individuals at different points in time. For instance, for the process of economic (re)integration, it is informative to compare migrants' occupational status before out-migration, upon arrival at destination, before moving back home and upon returning to the origin country (Castagnone et al. 2013).

[24] This is not necessarily the first migration in people's lives (see individual number 1, Table 9.3).

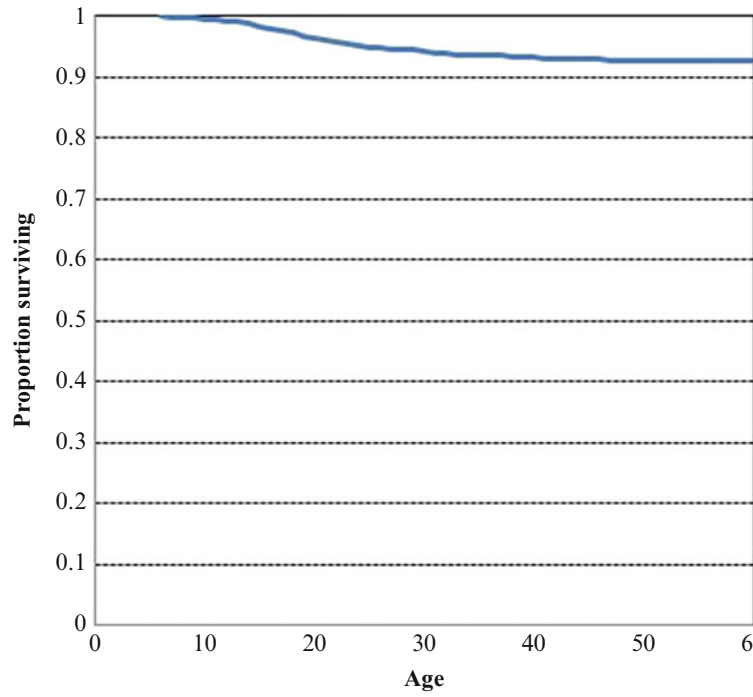

Fig. 9.1 Survival curve by age, first migration from rural areas to a city from age 6 in Burkina Faso (Source of data: EMIUB survey, Burkina Faso (2000). Computation by the authors. Weighted estimates)

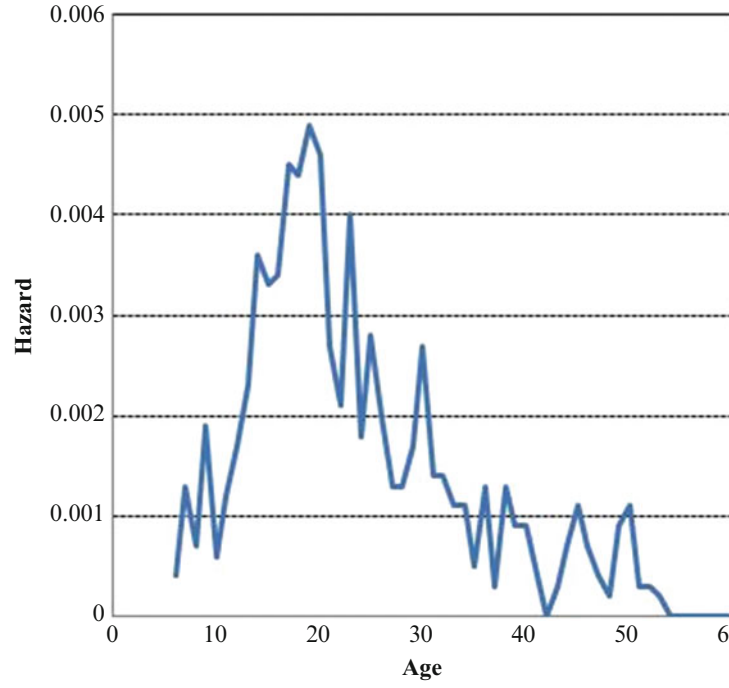

Fig. 9.2 Hazard by age (life table estimates) of first migration from rural areas to a city from age 6 in Burkina Faso (Source of data: EMIUB survey, Burkina Faso (2000). Computation by the authors. Weighted estimates)

(duration), among those who have not yet migrated. Despite fluctuations due to sampling errors, the overall shape is quite clear: chances of first migration increase quickly until about age 20, and then decrease to very low by age 40. Similar analyses can be disaggregated by fixed characteristics, such as gender (the figures would thus present two curves: one for females, the other for males).

Migration Histories as Careers: Sequence Analysis

Migration histories can also be described with sequence analysis methods. For instance, Castagnone (2011) used sequence analysis to describe transit migrations between Senegal and Europe. Coulter and Van Ham (2011) used sequence analysis with the British Household Panel Survey to describe sequences of moving desires and moving behavior.

In essence, sequence analysis consists of describing sequences of states or events and summarizing them by creating typologies (e.g., with optimal matching, see: Abbott and Tsay 2000; Billari 2001; Ritschard et al. 2009). These methods treat migration histories (or part of them) as careers or trajectories, with the idea that a succession of migrations potentially forms a coherent story that unfolds over time. Migration careers are also connected with other careers (e.g., family, employment); and analyzing the patterns of states and transitions in different spheres over the life course provides a more holistic view of life histories. However, sequence analysis is subject to several limitations (Wu 2000; Billari 2001). For instance, right-censoring is not taken into account with such methods, and the way typologies are created has also been criticized (Wu 2000).

Compared to event history analysis, applying sequence analyses to mobility histories have still been largely unexplored. The availability of new data sets (from retrospective surveys and panel surveys) and the development of software tools open new fields for applying sequence analysis to migration studies.

Explaining Migration with Discrete-Time Event History Models

A Simple Illustration

Descriptive analyses provide very important features, such as the age pattern of hazards of first migration and an estimate of the percentage of people who have experienced the event of interest. Yet, they are limited in several respects. The number of explanatory variables that can be taken into account simultaneously is limited, and time-varying variables are not easily incorporated. Event history models provide a solution to these issues and allow –to some extent– performing causal analyses (Blossfeld et al. 2007). In this section, we describe simple discrete-time event history models with a few variables.[25] Using the data from the EMIUB survey, the analyses aim at explaining migration from a village to a city in Burkina Faso (case 3 in Table 9.6). More elaborate models are discussed in the next section.

In the discrete-time event history model, p_{ij} represents the probability that individual i experiences the event (migration) at duration j, conditional on having not experienced the event before duration j and conditional on the values for the X variables at duration j.[26] Based on Singer and Willett (2003, pp. 371–372), we write it in the following way:

$$p_{ij} = Pr\left[T_i = j \,\middle|\, T_i \geq j \text{ and } X_{1ij} = x_{1ij}, X_{2ij} = x_{2ij,\ldots}\right] \tag{9.4}$$

This conditional probability is also called the discrete-time hazard (Allison 2010; Singer and

[25] Discrete time event history models are usually preferred with discrete-time data (Scott and Kennedy 2005). In contrast, continuous time event history models rely on the idea that events occur in continuous time, and that data are collected accordingly (Allison 2010). For a presentation of the different types of models, see Blossfeld et al. (2007) and ibid.

[26] The conditional probability measured in discrete-time event history models is close to the conditional probability of the life table, but not strictly equal because censored cases are treated differently.

Willett 2003). A logistic regression is used to estimate the effect of explanatory variables on that conditional probability. The statistical model is specified as follows:

$$log\left(\frac{p_{ij}}{1-p_{ij}}\right) = \propto_j + \beta_1 \cdot X_{1ij} + \beta_2 \cdot X_{2ij} + \ldots \tag{9.5}$$

The logit of the conditional probability is a function of duration and covariates. α_j represents the baseline hazard function, i.e., the relationship between the (discrete-time) hazard and the duration since the beginning of time. The baseline hazard function can be modeled by a function of the time, or be estimated with a series of dummy variables for different durations (Allison 2010). In this example we model it as a function of age and of the logarithm of age. The X variables are individual or contextual covariates. These covariates can be fixed or can vary over time (time-varying covariates).

Since we are modelling a conditional probability, the data need to be organized as a person-period data file, in which people appear as many times as the number of periods in which they are at risk of experiencing the event (see Table 9.4). For each period except the last one, the migration variable is equal to 0. In the last period, the migration variable can either be equal to 1 (migration occurred in that period), or equal to 0 (censoring). In Table 9.4, the migration variable is equal to 1 in the period beginning in July 1994, since the individual migrated to a city in September 1994 (Table 9.5). This dichotomous variable is the dependent variable of the logistic regression.

A first model that includes only the baseline hazard is fitted, and three coefficients are estimated: the constant, the coefficient of age, and the logarithm of age (Table 9.7, model 1). By transforming Eq. 9.2, these coefficients can be used to compute the odds of first migration by age:

$$\frac{p_{ij}}{1-p_{ij}} = exp[\propto_0 + \propto_1 \cdot age + \propto_2 \cdot \log(age)] \tag{9.6}$$

Conditional probabilities of first migration by age are obtained in the following way:

$$p_{ij} = \frac{exp[\propto_0 + \propto_1 \cdot age + \propto_2 \cdot \log(age)]}{1 + exp[\propto_0 + \propto_1 \cdot age + \propto_2 \cdot \log(age)]} \tag{9.7}$$

In this example, odds and probabilities are very small and, as a result, are almost equal. Figure 9.3 shows the predicted odds (Eq. 9.3) of first migration by age.[27] The shape is very similar to the shape in Fig. 9.2, indicating that the simple function of age and logarithm of age captures the age pattern of first migration in a satisfactory way.

A second model includes gender as an additional time-constant variable (Table 9.7, model 2). Regression coefficients are presented in the first column, and odds ratios (exponentials of the regression coefficients) in the second column. The odds ratio of females compared to males is equal to 0.67. This tells us that females are one third less likely than males to migrate to cities *at all ages*. Predicted odds by age and gender are shown in Fig. 9.4. The assumption of proportionality of odds that we make with the discrete-time event history model means that the curve for females is below the curve for males, and that the ratio of these two curves is equal to 0.67 at all ages.

In the third model, the number of years of schooling is included as a time-varying explanatory variable. Education is strongly related to migration to cities: the greater the number of years of education, the larger the odds of moving to Ouagadougou or Bobo Dioualasso (model 3, Table 9.7). Interestingly, this model shows that, controlling for education, gender differences are no longer significant. In other words, gender differences are completely accounted for by differences in education between males and females.

Alternative Analyses on the Determinants of Migration

The determinants of migration are manifold and much more complex than what was presented in the previous section. Properly identifying some

[27] The probabilities predicted in the models are probabilities in three-month intervals. For the figures, they have been transformed into yearly probabilities.

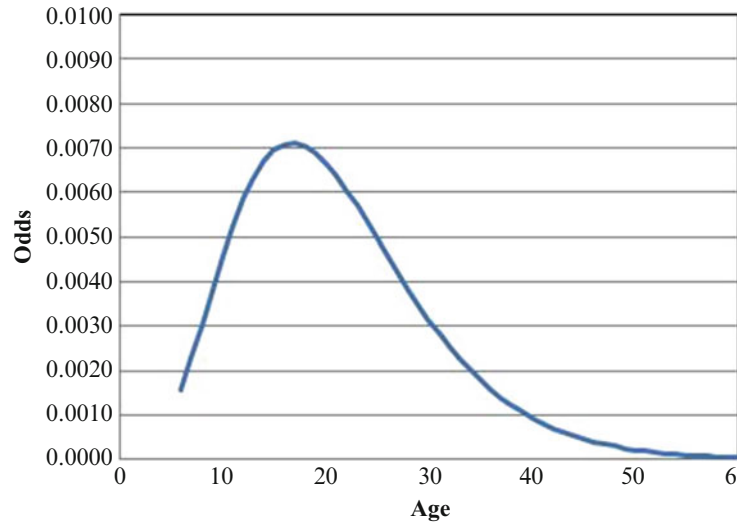

Fig. 9.3 Predicted odds (discrete time event history model) of first migration by age from rural areas to a city in Burkina Faso

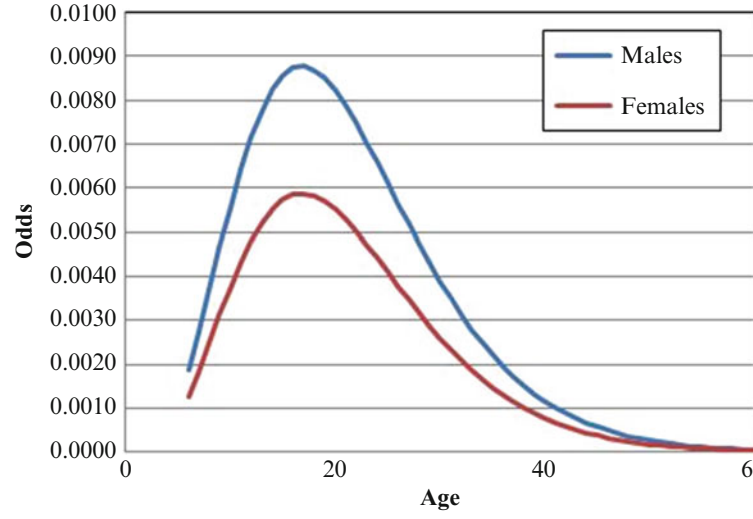

Fig. 9.4 Predicted odds (discrete time event history model) of first migration by age from rural areas to a city in Burkina Faso, by gender

of these determinants requires specific data and poses new challenges. We discuss below some of these challenges and new approaches in modelling event history data on migration.

The Role of Others: Linking Mobility Histories from Different People

As discussed in section "Social circle", integrating the role of "others" in explaining migration behavior has received increased attention, and new data on the interviewees' social circles (and networks) are now available. Such data allow using the migration histories of other family members or friends as independent variables in the models (Palloni et al. 2001; Curran and Rivero-Fuentes 2003; Liu 2013). For instance, Curran and Rivero-Fuentes (2003), using data from the Mexican Migration Project, showed that there were differences by gender in the effects of migrant networks on internal and international migration. Using more detailed data on the composition of networks from the MAFE project, Liu (2013) showed that the likelihood of leaving Senegal

for one of three European countries (France, Italy or Spain) depended on the network and on the nature of ties between individuals and their networks (weak ties versus strong ties) (see also Toma and Vause (2013) for comparisons between DR Congo and Senegal). By including the migration of others in the equation, such approaches take into account a powerful determinant of mobility. However, methodological challenges remain. For instance, it is necessary to account for the fact that part of the association between the network and the propensity to migrate may be spurious because of selection effects, i.e., it may result from unobserved variables that influence the chance of migration and a person's network membership (Palloni et al. 2001, p. 1267).

Multi-level Approaches

Multilevel data is key to understanding migration, as demonstrated by the powerful effects of social circle variables and/or community-level variables on individual migration (Beauchemin and Schoumaker 2005; Curran and Rivero-Fuentes 2003; Henry et al. 2004; Liu 2013). One of the challenges is to collect the relevant data at the appropriate level. Another challenge is to take into account the multilevel nature of the data in the modelling stage. Research using multilevel event history data has so far mainly been done with fairly conventional methods, i.e., multi-level data are used in the models, but the models themselves are not built following a multi-level methodology. Actually, the use of multilevel event history models in migration studies has remained limited. One of the few examples is the work by Kulu and Billari (2006), who use multilevel discrete-time competing risk event history models to analyze internal migration in post-soviet Estonia. They include a regional-level random residual in their model, in addition to individual and contextual data and cross-level interactions. This regional-level random residual is used to measure unexplained regional variations, controlling for individual and contextual factors. Courgeau and Baccaini (1997) used similar methods with migration data in Norway. In these applications, level-2 units[28] are operationalized as regions, which are relatively large. The use of multilevel event history models with level-2 units at the local level (village and ward) certainly deserves more attention, as in other fields of demography. Modeling complications that arise when repeated migrations are taken into account (Windzio 2006) probably hamper the development of such works, along with the lack of longitudinal multilevel data.

Integrating Data on Destination Places

Despite the widespread recognition that migrations potentially depend on the characteristics of origin and destination areas (the so called push and pull factors), event history models that include both origin and destination characteristics have been rare. It is straightforward to include time-varying characteristics of the destination as independent variables when only migrations to a single destination are modelled. For instance, if one models migrations from rural areas to the capital city, the number of family members in the capital city can be included as an explanatory variable. It is more complex, however, to take into account the characteristics of destinations when migrations to several (and potentially many) destinations (alternatives) are considered at the same time. One needs to take into account the characteristics of alternatives with conditional logit models (Liang and White 1997; Faggian et al. 2007). Applications that use event history data and that look at the effect of the characteristics of the destinations at the local level have been rare. One difficulty is the fact that the number of alternatives is very large. To address this issue, it is possible to consider a sample of non-chosen alternatives rather than all the possible

[28] In this context, level-2 units are spatial units within which individuals are nested, and for which a contextual-level random term is included in the multilevel regression model.

destinations. This was done by Henry and Bilsborrow (2009), who were able to distinguish push factors (the effects of variables in the place of origin) and pull factors (the effects of variables in potential destinations) on migrations in Burkina Faso. It would be of great interest to further develop and apply such approaches for internal or international migrations with event history data.

Desires, Intentions, Attempts and Effective Migrations

The empirical links between desires, intentions, attempts to migrate and actual moving behavior have recently received some attention, but remain little studied. A recent experience was tested in the MAFE surveys: information was collected on migration attempts[29] from three African countries (DR Congo, Ghana and Senegal). These attempts were dated, and the types of steps undertaken to try to migrate were listed by the respondents. Such data allow measuring and explaining the probability of *trying* to migrate, and not only the probabilities of actual migration. Since information was also collected on effective migration, it is also possible in this way to evaluate the determinants of migration attempts, as well as to what extent the attempts translate into actual migrations, and how the "success rate" is affected by individual and contextual variables. Mezger (2012) jointly modelled migration attempts and migrations from Senegal to three Europe countries,[30] and showed that education, for instance, is a strong predictor of migration attempts, but not of actual migration that is conditional on having attempted migration. Retrospective approaches are, however, limited for collecting data on desires, intentions and attempts. Memory problems and ex-post rationalization are two potential issues. In contrast, panel data are more reliable for measuring intentions and desires, and provide another way to treat this question. Such data have been used in the Netherlands (van Dalen and Henkens 2008) and with the British Household Panel Survey data (Coulter and van Ham 2011).

Using Migration Histories to Explain Other Phenomena

Longitudinal data on migration are also used to evaluate the effects of migration on other behaviors, to differential behaviors between migrants (and sometimes return migrants) and non-migrants, or more simply to measure differences by place of residence in a proper way, i.e., using a time-varying variable for the place of residence (region, urban-rural, etc.). Treating the variety of topics and challenges encountered in using migration histories for explaining other phenomena data is beyond the scope of this chapter. We simply illustrate a few ways in which migration histories are used in such approaches.

In the simplest way, migration histories can be used to construct a time-varying variable for place of residence (e.g., urban/rural). Without migration histories, the place of residence is often considered to be time constant, i.e., researchers consider that the place of residence at the time of the survey has never changed. For instance, birth histories in Demographic and Health Surveys allow using longitudinal methods for analyzing fertility determinants, but the lack of full migration histories limits the use of place of residence as an independent variable. In contrast, the study by White et al. (2008) on the links between urbanization and fertility in Ghana can use place of residence as a time varying variable.

Longitudinal migration data can also be used to compare migrants and non-migrants. A typical example of such analysis compares migrants and non-migrants in urban labor markets. This has been addressed with biographic surveys in several African cities (Bocquier and Le Grand 1998; Zourkaleini and Piché 2007). Mezger and

[29] Attempts were defined as steps that were undertaken in order to migrate to another country. The steps could be as varied as saving money, taking a flight to an intermediate destination, obtaining a passport, etc.

[30] She uses bivariate probit models and person-year data from the MAFE project.

Flahaux (2013) provide another example of using migration histories in the construction of explanatory variables of other phenomena. In their analysis of the links between migration and occupational status in Dakar, they are able to compare return migrants with non-migrants, and also include some of the migration experience of the migrants: the length of their stay abroad, whether they remitted while abroad, and the motive of their return. Research on the links between life satisfaction and migration over the life course also provides interesting examples of different ways to use migration histories (Findlay and Nowok 2012).

Conclusion

Over the last three decades, the collection of longitudinal data on migration and the development of longitudinal methods have opened up new opportunities for analyzing both domestic and international migration. Retrospective migration surveys and panel surveys have allowed significant progress in the measurement of migration patterns and trends, both in the description of migration histories as well as in the identification of migration determinants. Collecting and analyzing longitudinal data is generally more complex than dealing with cross-sectional data, but the pay-off is important: longitudinal data are more suitable for causal modeling than cross-sectional data; they allow reconstructing past trends in migration behavior; and they can provide a more holistic view of migration over the life course in relation with other domains, such as employment and family.

This chapter has offered an overview of the conceptual, practical and methodological issues and challenges in collecting and analyzing longitudinal migration data. Despite the tremendous progress over recent decades, this field will certainly face some significant challenges and witness major transformations in the coming decades. A persistent challenge will lie in continuation of the production of longitudinal data on migration. Good quality longitudinal data on migration have been produced in a variety of contexts, both in terms of internal and international migration, but such data remains rare compared to other types of demographic data and their comparability is also a challenge. In the context of increasing mobility, harmonizing and developing the collection of longitudinal data on migration would be a great investment for the advancement of knowledge on migration.

Methodological innovations for exploiting these data are potentially manifold. Some of the recent developments were briefly discussed here: the use of multilevel methods to deal with multilevel data in a full way (Kulu and Billari 2006); methods that take into account selection effects when modelling the effects of social circles on individual migration (Palloni et al. 2001); and methods that allow integrating characteristics of the place of origin and destination in modelling migration determinants (Henry and Bilsborrow 2009), among others. The description of migration histories, with sequence analysis (Billari 2001), data mining approaches (Ritschard et al. 2009), or graphical methods (Carling 2012) may also progress in the coming years. Agent-based modelling,[31] which has only recently entered the field of migration studies (Kniveton et al. 2011; Willekens 2012), may also generate new insights into the migration decision-making processes and lead to other means for using migration histories.

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[31] Agent-based modelling consists of simulating life histories (e.g., migration histories) as an outcome of decision processes that are modelled explicitly. These aggregated individuals should be able to reproduce macro outcomes. Agent-based modelling thus consists of simulating migration histories rather than analyzing real migration histories. Observed migration histories can nevertheless be used to estimate transition rates needed to simulate migration histories.

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Migration Analysis Using Demographic Surveys and Surveillance Systems

10

Philippe Bocquier

Introduction

Most demographic data sources contain information on mortality and fertility, very few on migration. Nonetheless, some demographic sources can be quite helpful for the study of migration, even though migration analysis was not a core objective of the data collection. In some cases it is only a single question, in some others it is a set of more or less complex questions on migration.

This chapter endeavors to review the possibilities of including migration in demographic analysis, either as a dependent variable or as an independent variable, using existing demographic data that were not initially collected to study migration. By giving scholars basic advice regarding the potential and limitations of two major demographic data sources in developing countries, namely Demographic and Health Surveys (DHS) and Health and Demographic Surveillance Systems (HDSS), this chapter is intended to encourage scholars to dare use these sources for migration study. It will therefore not cover two other main demographic sources, census data (cf. Chap. 8 by Sobek) and migration-specific surveys (cf. Chap. 9 by Beauchemin and Schoumaker).

This chapter is organized as follows. Criteria to evaluate data sources as regard to migration analysis are presented in a first section. The second section is devoted to the use of migration data as a determinant, taking DHS in selected West African countries as examples. The third section shows how to use HDSS data to study migration as both an event and a determinant. These sections are illustrated with examples of analyses by the author and by others. The chapter concludes with a synthesis and way forward.

Criteria to Evaluate Data Sources as Regard to Migration Analysis

Because most of the demographic sources were not meant to produce migration indicators, the data collection tools and sampling procedures used to produce these data are not necessarily adequate for migration analysis. This section aims at reviewing the main criteria that can help evaluate the quality of a demographic source as regard to migration analysis. Ability of data sources to estimate migrants' economic, social and demographic characteristics well is not sufficient. The data sources should be gauged on their ability to reliably estimate flows between origins and destinations (migration matrices) and the corresponding rates, which are at the core of migration analysis.

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_10

Sampling Procedures

Sampling aims at representing as best as possible a living population at a given point in time. Sampling involves random choice of locations, households and sometimes individuals in a given spatiotemporal universe. The sample is meant to represent first current characteristics or behavior of sampling units. How the sample represents past characteristics or behavior, including migratory itineraries, is more challenging and depends a lot on how the current situation (e.g. repartition of migrants) depends on past behavior (e.g. migration histories). The sample will obviously not be representative of the dead if their behavior differed from the living. It will not be representative of the international emigrants either if their behavior differed from the population still in the country. These biases are obvious and well known although difficult to evaluate to the point that, despite evidence of the contrary, most migration analyzes assume independence of mortality and migration or international and internal migration. However, other biases may originate in the sampling procedure even after discarding biases due to death or international migration.

Considering that most demographers use surveys as their main data sources, it is important to consider how migration analysis is restricted or enhanced by sampling choice such as sample size, stratification, and oversampling. Although HDSS are usually not based on samples as such, since they usually involve exhaustive data collection on a population limited by clear geographical boundaries, HDSS will be included in the discussion as they involve a choice in the target population, in terms of geographical area, time-frame, population size, etc. The quality implications are not the same but the same criteria may be used to evaluate these sources.

Apart from censuses and population registers, demographic data collection usually involves the choice of a target population. Ideally, surveys should be representative of both sending and receiving areas (Bilsborrow et al. 1984; Courgeau 1988). Although many national surveys pretend to be representative at the national level, the sample is not necessarily drawn in such a way to be representative of all relevant geographical units in the national space. Typically a national sample will be representative of both rural and urban strata, including perhaps the major urban agglomeration. Very rarely a national sample is representative of all administrative regions of a country, since this involves a substantial increase in sampling size. For the same reason, even rarer are samples that are representative of regions and area (urban versus rural) of residence within these regions.

Because most surveys employ stratified sampling to reduce costs of data collection, household clusters are drawn in large strata. Usually urban strata are overrepresented as main destination areas so that more detailed information is collected on migrants where they live. Typically, clusters of urban households that represent urban areas are drawn within a limited number of cities that are themselves drawn from a list of all cities in the country. Ideally urban households should represent the whole spectrum of city size (from small towns to the capital city) but very often only two or three cities of different sizes are represented. Stratification is also used within rural areas, although the main criterion to classify rural households is not the size but rather the ecological environment. For both urban and rural areas, the stratification strategy results from a trade-off between representativeness and cost that implies that the sample is not often representative at a very low geographical scale.

The choice of strata represents therefore an important limitation for the analysis of migration flows. A sample based on rural and urban strata will be sufficient to analyze urban-rural flows in both directions but not interregional flows. Suppose that a country have ten regions but only four have been sampled. Even if successive residences in all ten regions are collected for all migrants in the sample of four regions, these migration itineraries will not be representative of migration flows to and from the six regions that were not sampled. The same holds if only two cities are sampled among urban areas: the

inter-urban migration matrix will not be representative of all flows between the hierarchy of urban areas. To analyze urban-rural migration at the regional level, samples will have to be representative at the regional level, preferably in addition to the urban-rural level. This was done in the Network of Surveys on Migration and Urbanization in West Africa (NESMUWA) conducted in eight West African countries simultaneously in 1993 (Bocquier 2004; Bocquier and Traoré 1998). NESMUWA was a unique set of surveys aiming at measuring both internal and international migration flows in the 5 years preceding data collection.

As shown in Table 10.1, in seven out of eight countries[1] between 20 and 30 strata were defined of which 50–68 % were urban (58 % on average, against 30 % urbanization rate in the population). The sampling of a larger proportion of urban areas was necessary to better evaluate migration flows toward and between different categories of cities classified by size. As a consequence of the high number of strata, sample size was quite large varying from 7364 to 13,292 households. The mean number of households per stratum varied from below 250 (for three countries) to around 500 (for another three countries), Guinea (818) excluded. The number of individuals per stratum varied from 1370 to 3729 with an average of 2455, Guinea (6083) excluded.

Other surveys do not offer such large samples and a sampling procedure that ensure good representation of all urban areas by size category. Nonetheless most DHS surveys oversample urban areas because they are deemed more heterogeneous. This is rather good news as in most countries urban areas are also destinations for migrants. DHS samples may therefore be sufficient to provide origin-destination migration matrices by large rural and urban categories. However a minority will give reliable estimates of migration flows by both administrative region and urban-rural areas.

The Table 10.2 takes the examples of DHS for NESMUWA countries. Very few DHS samples combine a high number of strata (>7), a large sample (>7000 households), strata defined by both administrative region (RG) and urban-rural areas (UR), and oversampled urban areas (higher than 1.1 ratio of sampled urban households share to percent urban in population as estimated by the UN). Only DHS-Guinea 1992, DHS-Mali 1995–1996, and DHS-Niger 2006 fulfill all four criteria. However, all DHS from Mali and Niger fulfill at least three criteria, making time-comparison of three DHS possible for these two countries albeit with some grouping of geographical areas (strata were not defined the same way from one survey to the next). By contrast, analysis of migration matrices will be rather poor for Burkina Faso and Côte d'Ivoire. There were missed opportunities in Guinea where sample size was reduced and urban oversampling abandoned for DHS conducted in 1999 and 2005. For DHS-Burkina Faso 2003 and DHS-Senegal 1999, it might still be possible to construct matrices by both administrative regions and urban-rural areas after careful examination of the mean number of households per urban and rural areas (not available from DHS-MEASURE web site).

In HDSS, there is no sampling issue as such as regard to the population under surveillance. There might be samples drawn from this population but the universe to which these samples refer would be the population under surveillance (or a subset of this population defined along some demographic or socioeconomic criteria) and not any other population. Yet, migration analysis heavily depends on the choice of the population under surveillance. Whereas representativity is not a concern in HDSS, exemplarity is. Idiosyncrasy is something that HDSS analysts should control when possible. Among the possible tools is the use of some control group external to the HDSS, the systematic comparison with the general population (e.g. using census data), or the comparative analysis of several HDSS controlling for macro characteristics of these HDSS. At the very least, one should be careful to refer to idiosyncrasy issue explicitly in the analyzes.

[1] We exclude the survey in Nigeria from the discussion as it followed a very different methodology.

Table 10.1 Number of strata, household and individuals in the NESMUWA surveys

Country	Strata (urban/ total)	Number of household	Mean number of households per stratum	Number of individuals	Mean number of individuals per stratum
Burkina Faso	10/ 20 = 50 %	10,091	504	64,798	3240
Côte d'Ivoire	20/ 30 = 67 %	13,292	443	69,902	2330
Guinea	5/ 9 = 56 %	7364	818	54,750	6083
Mali	15/ 22 = 68 %	10,890	495	82,042	3729
Mauritania	13/ 28 = 46 %	7385	264	51,337	1833
Niger	16/ 30 = 53 %	6870	229	41,095	1370
Senegal	19/ 29 = 66 %	7635	263	64,601	2228
Average	58 %	9075	431	61,218	2973

Source: Bocquier and Traoré 1998

Another consideration is that pointed by Sankoh and Byass (2012) of "whether the final population is defined as being within a contiguous area or in a collection of small areas (e.g. discrete villages or city quarters) within a wider area". This affects the definition of migration events "since local moves in a non-contiguous population may be classified as in- and out-migrations, whereas similar moves in a contiguous area would amount to within-site migrations" (Sankoh and Byass 2012). Even if the HDSS is defined as a contiguous area, migration with neighboring areas will depend on the varying degree of isolation (or its opposite, integration) of the HDSS in a larger area. For example, if the HDSS area is situated in a rather dense web of villages or in a city, then the chance to cross the HDSS boundaries increases. A good indicator of this closeness to neighboring areas is the intensity of marriage-related migration, or marriages that result in migrations. Marriages in isolated populations tend to be more endogamous.

Data Collection Tools

Provided that the sampling procedure is adequate, questionnaires have obviously to include questions on migration. Migration histories from birth to the time of interview as collected in the NESMUWA surveys would be ideal but this is not standard in non-migration-oriented surveys (see Chap. 9 by Beauchemin and Schoumaker in this volume for a review of these surveys). However many surveys include questions on place of birth and on place of previous residence.

Matrices cross-tabulating place of birth with current place of residence may be used to form indicators summarizing lifetime migration. Exposure time to the risk of migration varies from one individual to the other depending on the age of the individual at the time of data collection. In other words, the indicator is heavily right-censored. The indicator will therefore be very dependent on the age structure, unless it is computed by cohort, i.e. for specific age groups. Lifetime migration cohort indicators may be computed and compared over several censuses or surveys, e.g. proportion whose place of residence is different from place of birth, or proportion living in urban area born in rural areas, etc. Apart from the problem of age-control, lifetime migration indicators make the implicit assumption that only one migration occurred (from place of birth to place of current residence). A consequence is an underestimation of migration intensity since migration is a

Table 10.2 Stratification indicators in Demographic and Health Surveys for a select group of West African countries

Country, year	Number of households interviewed			Strata Type (UR = urban-rural, RG = region, IN = intervention)	Urban household share (a)	Percent urban in population (UN) (b)	Urban over-sampling index (a)/(b)	Number of strata			Mean number of households per stratum			Quality index for migration matrices analysis[a]
	Urban	Rural	Total					Urban	Rural	Total	Urban	Rural	Total	
Burkina Faso														
DHS 1993	2431	3275	5706	UR	42.6 %	14.6 %	2.92	2	1	3	1216	3275	1902	1
DHS 1998–1999	1448	3685	5133	UR, IN	28.2 %	17.0 %	1.66	3	2	5	483	1843	1027	1
DHS 2003	2340	7130	9470	RG	24.7 %	20.0 %	1.23	na	na	13	na	na	728	3
Cote d'Ivoire														
DHS 1994	2982	3366	6348	UR	47.0 %	40.8 %	1.15	3	2	5	994	1683	1270	1
DHS 1998–1999	1562	740	2302	UR, IN	67.9 %	42.8 %	1.59	3	2	5	521	370	460	1
Guinea														
DHS 1992	3990	3164	7154	UR, RG	55.8 %	28.6 %	1.95	5	4	9	798	791	795	4
DHS 1999	1714	3751	5465	UR, RG	31.4 %	30.7 %	1.02	5	4	9	343	938	607	2
DHS 2005	1800	4680	6480	UR, RG	27.8 %	32.8 %	0.85	8	7	15	225	669	432	2
Mali														
DHS 1995–1996	3099	6413	9512	UR, RG	32.6 %	25.8 %	1.27	7	6	13	443	1069	732	4
DHS 2001	3136	10,581	13,717	UR, RG	22.9 %	28.7 %	0.80	7	6	13	448	1764	1055	3
DHS 2006	4413	9282	13,695	UR, RG	32.2 %	31.7 %	1.01	9	8	17	490	1160	806	3
Mauritania														
DHS 2000–2001	3979	2779	6758	UR, RG	58.9 %	40.0 %	1.47	5	4	9	796	695	751	3
Niger														
DHS 1992	2261	3558	5819	UR, RG	38.9 %	15.6 %	2.50	8	7	15	283	508	388	3
DHS 1998	1766	4611	6377	UR, RG	27.7 %	16.0 %	1.73	6	5	11	294	922	580	3
DHS 2006	2508	5910	8418	UR, RG	29.8 %	16.9 %	1.77	8	7	15	314	844	561	4
Senegal														
DHS 1992–1993	1587	2148	3735	UR, RG	42.5 %	39.3 %	1.08	4	4	8	397	537	467	2
DHS 1997	1681	3359	5040	RG	33.4 %	39.9 %	0.84	na	na	12	na	na	420	1
DHS 1999	2724	5137	7861	RG	34.7 %	40.2 %	0.86	na	na	50	na	na	157	2
DHS 2005	3320	4539	7859	UR, RG	42.2 %	41.1 %	1.03	11	11	22	302	413	357	3

[a]1 = poor, 2 = fair, 3 = good, 4 = excellent. This index is the sum of the following 4 criteria favorable to migration flow analysis: a high number of strata (>7), a large sample (>7000 households), strata defined by both administrative region and urban-rural areas (UR, RG), and oversampled urban areas (>1.10)

renewable event. Another consequence is that return migration is not taken into account since place of current residence will be the same as place of birth. In sum, lifetime migration matrices are seriously biased and are not favored by demographers although they are the most widely available data on migration.

The question on place of residence *(t – n)* years before the survey is sometimes asked in censuses (place of residence at previous census or *n* years ago). It is not a good question to estimate the number of migrations, because it assumes only one migration over the period. In particular, return migrations are not taken into account. Yet, this question is good to estimate net migration rates over the period *n*. The question on place of previous residence that captures recent migration (including return migration) was preferred in DHS. Last migration would be representative of all migrations under the strong assumption that migrants migrated only once over the reference period. This assumption is reasonable when the reference period is short, because the shorter the period of reference the higher the probability to migrate only once. Data from the REMUAO surveys may be used to estimate the optimal reference period before survey for the most recent migration. Figure 10.1 represents the distribution of last migration by year before survey and the kernel density of this distribution. Last migration is clearly skewed to the right. Figure 10.2 shows how the distribution spreads to the left the higher the rank of the migration before the survey.

Figure 10.3 shows the distribution of the last migration in four REMUAO countries (both sex, weighted samples). This Figure provides a justification for considering that indicators of place of previous residence should be based preferably on a 3-year reference period before survey. Migration matrices on longer periods will lead to higher underestimation of migration rates. In the four chosen REMUAO countries (Table 10.3, pooled samples), last migrations represent 79.4 % of total migrations recorded in the 3 years before surveys, but their share drops from 89.0 % in the year immediately before the survey to only 69.7 % in the third year before the survey. Moreover, on longer than 3-year reference period, migration indicators based on last migration only will be seriously biased, since they will under-represent migrations of frequent movers, i.e. individuals who migrated more than once in the reference period.

The question on place of previous residence is asked to members of the households at the time of the survey. Members who moved out of the household are not taken into account. This is not a problem for internal migration since movers not counted in households at origin are supposed to be represented in other households at destination. Still, international migrations will be missed since their households at international destinations will not be included in the national sample. In surveys and censuses, international emigration flows can be estimated using a specific questionnaire about members of the household who migrated, say in the 5 past years, to an international destination. This is the technique used in NESMUWA surveys. Under the assumption that emigrants migrated only once during the reference period, this questionnaire on emigrants is a good tool to estimate international out-migration flows, while questions on origin of international immigrant is sufficient to estimate international in-migration flows.

As compared to single question on last migration (or on residence *n* years ago), migration histories present the obvious advantage of exhaustivity. Indicators based on complete residential itineraries from birth to time of survey will necessarily give unbiased results, barring selection bias from mortality. HDSS usually record all residential moves within the surveillance area and across its boundaries since the beginning of surveillance (first enumeration). Unfortunately, complete migration histories from birth are rarely available for those who were not born in the surveillance area, for the period before the inception of the HDSS, and for in-migrants before their first move in the HDSS. While complete histories are not necessary to compute migration rates, their absence limits the use of past migration experience to explain migrations under surveillance.

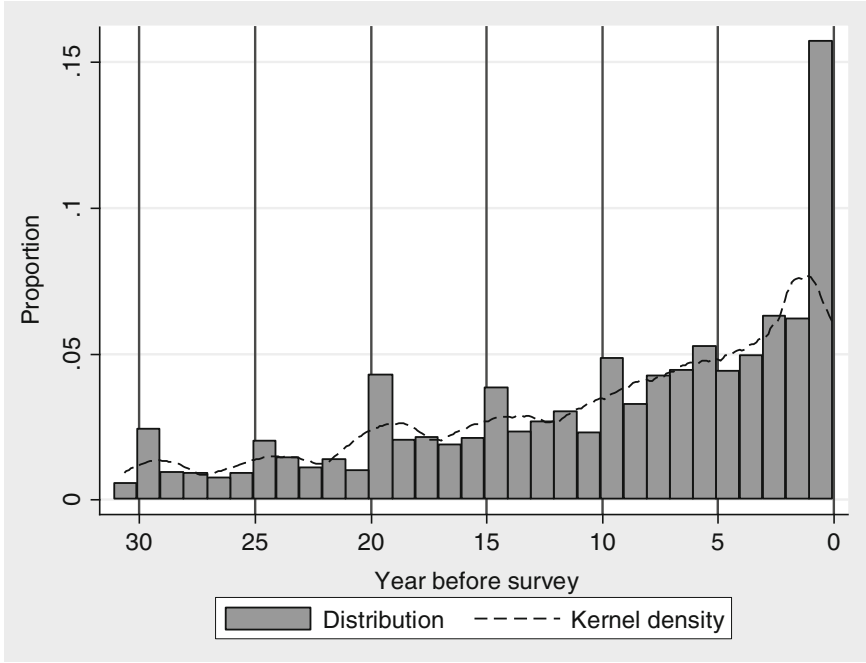

Fig. 10.1 Distribution of last migration– Mali, Female, 15 years and more (Source: REMUAO 1993, unweighted sample, our own computation)

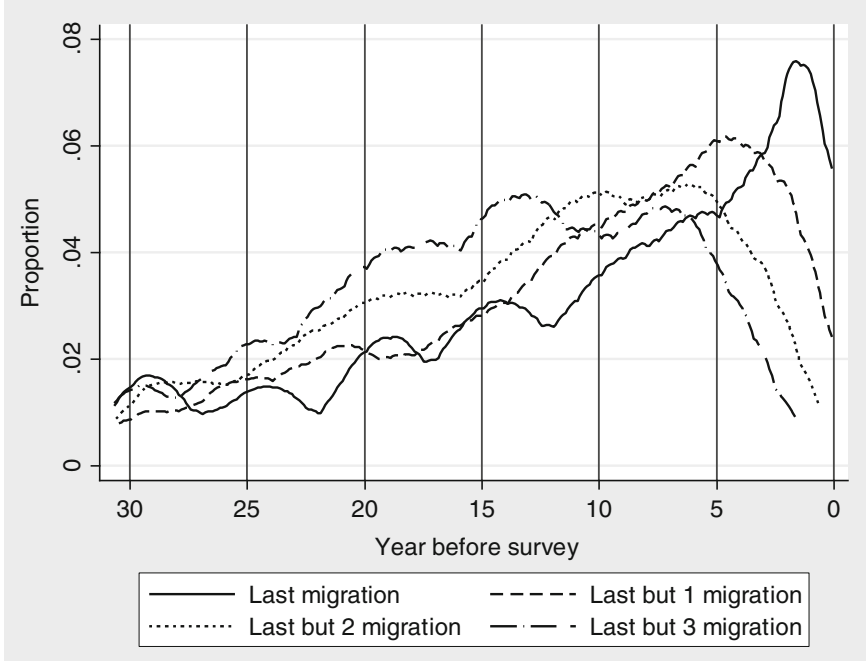

Fig. 10.2 Distribution of migration by rank – Mali, Female, 15 years and more (Source: REMUAO 1993, weighted sample, our own computation)

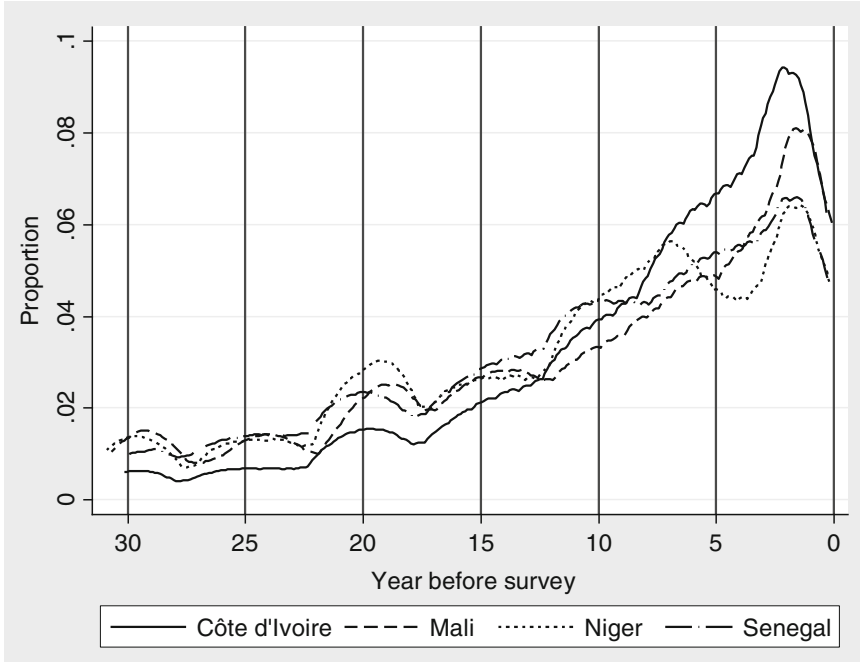

Fig. 10.3 Distribution of last migration by country (Source: REMUAO 1993, weighted samples, both sex aged 15 years and more, our own computation)

Table 10.3 Proportion of migrations by rank and by completed years before survey in Côte d'Ivoire, Mali, Niger and Senegal

Completed years before survey	Last migration	Last but 1 migration	Last but 2 migration	Last but 3 migration	Last but 4 or more migration	Total	Migrations (N)
0	88.98	9.69	1.00	0.34	0.00	100	5937
1	80.75	16.02	2.02	0.73	0.48	100	7705
2	69.74	23.50	4.36	1.37	1.04	100	7052
0–2	*79.36*	*16.75*	*2.52*	*0.84*	*0.53*	*100*	*20,694*
3	63.77	24.61	7.43	2.38	1.81	100	6988
4	54.15	30.49	8.67	3.97	2.73	100	6780
0–5	*71.24*	*21.05*	*4.73*	*1.76*	*1.22*	*100*	*34,462*
5–9	50.53	27.23	10.92	5.54	5.78	100	32,911
10–14	40.12	27.47	13.61	8.16	10.64	100	25,766
15–19	35.07	24.75	14.14	9.48	16.56	100	18,542
20–24	32.14	24.11	13.72	9.90	20.12	100	13,284
25–29	31.36	23.93	14.31	8.91	21.50	100	8811
30+	32.07	24.95	13.00	9.58	20.40	100	18,087
Total	46.66	24.83	11.05	6.67	10.80	100	151,862

Source: REMUAO 1993, weighted samples, both sex aged 15 years and more, our own computation

Another issue is with the minimum duration of residence criterion used to consider an individual either a resident or non-resident. The criterion is necessary to discard short-term visits either in or out of the surveillance area. The 3-month criterion means that an individual has

to reside in the surveillance area for at least 3 months to be designated as an in-migrant, while a resident in the system is designated as an out-migrant when away for at least 3 months. To make life easier to fieldworkers, this minimum duration of residence is often chosen to coincide with average time between household visitations, i.e. rounds of data collection. In principle, the precision for data collection should always be higher than the precision for data analysis. For example, if 6 months is the minimum duration of residence used for analysis, then the criteria used in the field should be less than 6 months (e.g. 4 or 3 months). That way, the analysis will not be influenced by variations in the implementation of minimum duration of residence in the field.

Last but not least, reasons for migration are important to collect. They cannot substitute for the analysis of determinants, which will be based on other covariates such as individual and household characteristics or events. Reasons for migration will however help to qualify individual migration. They complement well information on origin and destination. Use of reasons for migration is comparable in many ways to the use of causes of death in mortality analysis. Yet, reliability of reasons for migration is an issue. Contrary to origin or destination, reasons given by respondents are often subjected to recall bias (i.e. when the respondents does not quite remember the circumstances of migration) and to conformity or rationalization bias. The circumstances prior to migration will be redeemed or reinterpreted by the respondent under the light of what happened as a consequence of this migration. For example, if the migration was motivated by economic reasons but failed in that regard, then the respondent may be tempted, consciously or not, to shed a good light on this migration by evoking family or other reasons. Of course, it is impossible to know using retrospective data such as DHS what were the exact circumstances and views of respondents at the time of migration. Ideally, one could ask about intention to move prior to migration on a continuous basis in HDSS, but this has actually never been done.

The Case for the Demographic and Health Survey

Questions on Migration and Residences

Some DHS collect information on previous residence of adult respondents (female aged 15–49, and sometimes males aged 15–54 or 15–59) but never on their children. Residential histories have been collected to improve accuracy of recording other information, notably calendar data on contraceptive use. However, few countries chose to include this module. A total of 28 surveys in 16 countries collected monthly residence histories in a migration calendar: Bolivia (1993–1994), Brazil (1991–1992; 1996), Colombia (1990; 1995; 2000; 2005), Dominican-Republic (1991; 1996), Egypt (1992–1993), Guatemala (1995), Jordan (1997), Kenya (1998), Morocco (1992), Nicaragua (1997–1998), Paraguay (1990), Peru (1991–1992; 1996; 2000; 2004–2006, 2007–2008),[2] Philippines (1993; 1998), Turkey (1993; 1998), Vietnam (1997, 2002), and Zimbabwe (1994). The module was anyway collected only for women who used contraception in the past 5 years, which is an important limitation in most developing countries. Therefore, migration analysis using DHS must rely on information on previous residence collected on adult of reproductive age only, and that for about half the countries that conducted a DHS survey.

Information on the duration of stay in the current place of residence (urban or rural) and on the previous place of residence of the mother is available through two questions asked in the women's questionnaire: "How long have you been living continuously in (name of locality, town or city of current residence)?" and, if the person was not born in place of current residence, "Just before you moved here, did you live in a city, in a town, or in the countryside?" Country of previous residence is never asked, but sometimes the category "abroad" is added to the type of area. Duration of stay is available in years. Place of

[2] From 2004, Peru conducted continuous surveys.

current residence is available in fairly high resolution and its reliability depends on the stratification used for sampling. Place of previous residence is available in large categories, most of the time capital city, other urban (sometimes divided into large city and town), rural and, sometimes, abroad.

Limitations

Perhaps the most important limitation of using information on previous residence has to do with the temporal ordering of migration event vis-à-vis its covariates. The DHS may provide information on previous residence but the respondents' socioeconomic situation in this previous residence is not informed. Most of the socioeconomic variables are not time variant and thus reflect the respondent or household situation at the time of the survey. In particular, time-varying and area-specific indicators of wealth and access to services, as well as household characteristics and composition, would certainly provide better determinants of residential change than current situation indicators. This limitation is not particular to migration analysis and is in fact a serious limitation to any contextual approach of fertility and child mortality too. The principle of anteriority of the cause on the effect is breached when covariates are not strictly referring to the period before the event be it migration, birth, or death.

Another limitation is the number of years that can be reasonably covered by the question on previous residence. This question captures for each respondent last migration only. As mentioned in the previous section, migration matrices will only be reliable under the strong assumption that respondents have only been migrating once over a preferably short reference period. To determine the optimal length of this reference period is not easy without prior knowledge on migration intensity in the country. Because DHS main aim was not to collect information on migration, answers on duration of current residence and on place of previous residence may not be as reliable as in NESMUWA which aimed at collecting information on migration. Using NESMUWA 1993 surveys and DHS done around the same year, we compare rates of last migration by year before survey (Figs. 10.4 and 10.5). Because NESMUWA surveys recorded the calendar year of migration the rates are very much dependent on the month of interview in the survey year (1993). Côte d'Ivoire and Senegal conducted their survey later in the 1993 year than Mali and Niger. Therefore rates for 1992 and 1993 are combined into a rate representing 1 year duration of residence.

DHS offers estimates that are heavily marked by age heaping and seems to overestimate rates for 1 year duration of residence as compared to 2 years duration of residence. In both DHS and NESMUWA sources Côte d'Ivoire has the highest rates, while the three other countries have comparable rates (Table 10.4). Yet, rates are significantly different in the two sources for the 3 or 5 years before the surveys, except for 3-year rates in Niger. DHS produced generally higher rates than NESMUWA, except in Mali where the opposite holds. These differences may be attributed to differences in definitions of residence (any change of residence in NESMUWA surveys; village, town, or city where respondent was interviewed in DHS surveys) and in collecting duration of residence (counted in months in NESMUWA surveys; in years in DHS, which might explain the heaping: see Figs. 10.4 and 10.5), but also in sampling as mentioned before.

Analysis of international migration is limited to in-migration flows (provided that information on previous foreign residence is available) since no emigration questionnaire is available in DHS. International migration flows could in principle be measured through surveys in destination countries by computing the numerator using destination countries and the denominator in origin country. However, pre-coded responses to the question on previous residence in DHS do not include the country of previous residence. Therefore, recent international migration flows and determinants can only be analyzed using DHS for foreign origin as a whole and not by country of origin.

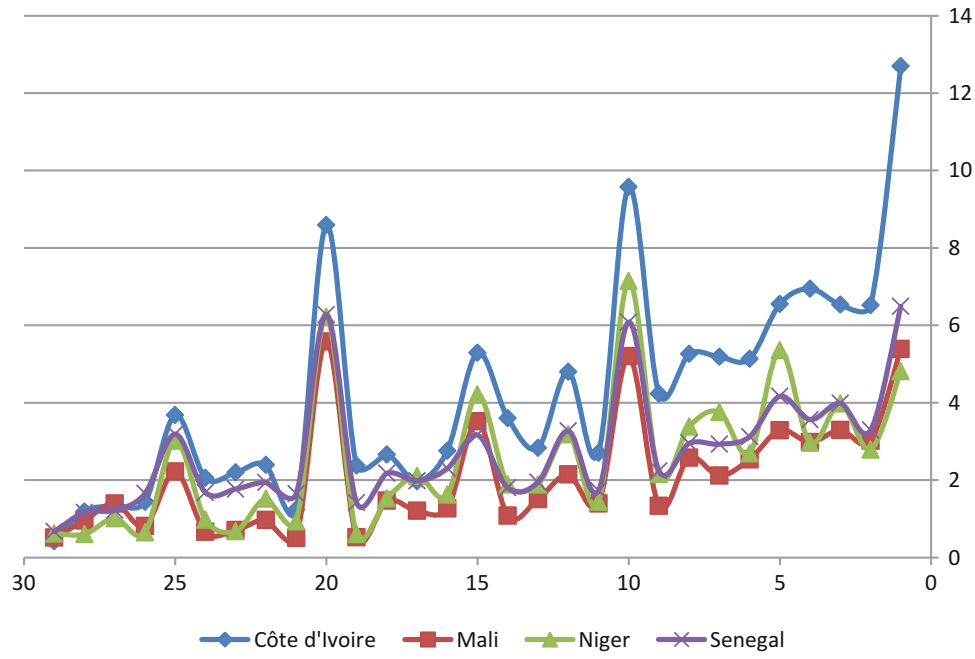

Fig. 10.4 Hazard rates of last migration (in %) by country (Source: DHS weighted samples, female aged 15–49, our own computation)

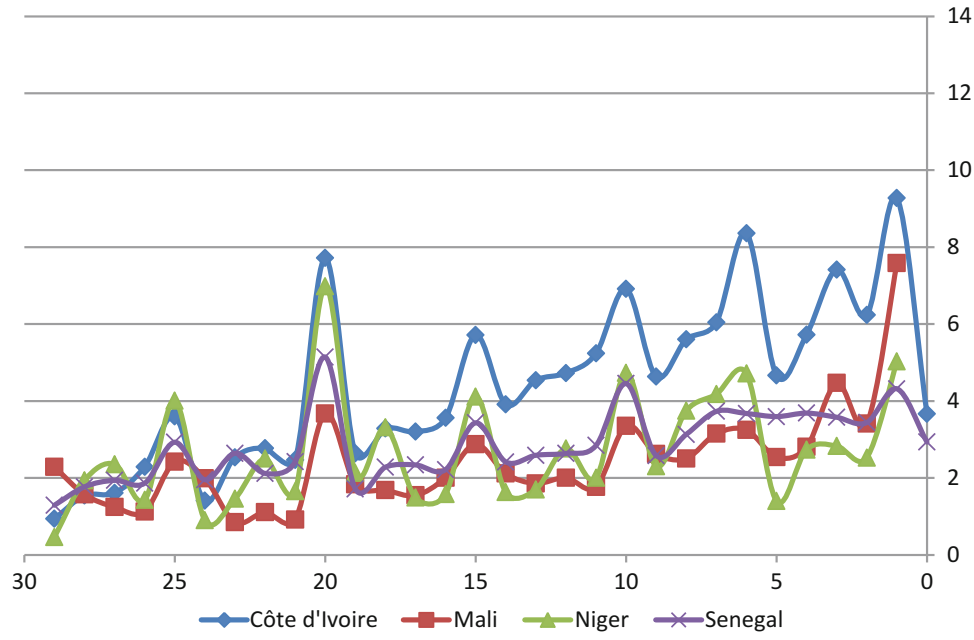

Fig. 10.5 Hazard rates of last migration (in %) by country (Source: REMUAO weighted samples, female aged 15–49, our own computation)

Table 10.4 Rates of last migration (in %) in the 3 and 5 years preceding survey by country

Country	Survey (date)	Rate of last migration 3 years before survey [95 % CI]	Rate of last migration 5 years before survey [95 % CI]
Côte d'Ivoire	REMUAO 1993	**6.31**	**6.41**
		[5.93–6.72]	**[6.10–6.75]**
	DHS 1994	**8.65**	**7.98**
		[8.24–9.08]	**[7.66–8.31]**
Mali	REMUAO 1993	*5.20*	*4.25*
		[4.87–5.56]	*[4.01–4.50]*
	DHS 1995–1996	*3.67*	*3.46*
		[3.44–3.92]	*[3.28–3.65]*
Niger	REMUAO 1993	3.49	**2.95**
		[3.18–3.84]	**[2.72–3.21]**
	DHS 1992	3.77	**3.92**
		[3.49–4.09]	**[3.68–4.17]**
Senegal	REMUAO 1993	**3.56**	**3.58**
		[3.33–3.80]	**[3.40–3.78]**
	DHS 1992–1993	**4.50**	**4.26**
		[4.19–4.83]	**[4.03–4.51]**

Source: DHS and REMUAO weighted samples, female aged 15–49, our own computation

Existing and Potential Analyzes

Migration analysis using DHS surveys has rarely been conducted. There is certainly here an opportunity for conducting a systematic cross-country, multi-year analysis of migration flows and migration determinants, for the 3 years preceding the survey. Migration flows by region *and* area (urban-rural) of residence might not be easily estimated because of sampling constraints (size and stratification), but migration by area of residence is possible using most DHS surveys. At the very least the urban-rural divide will be available while in most DHS surveys urban hierarchy also is.

The analysis of the determinants of migration may be done using fixed covariates, such as the basic age and sex variables, or others like ethnicity, and obviously place of residence. This would already a great progress in migration analysis as this type of analysis has actually never been done so far on a systematic basis for each DHS survey for which migration variables are available. Of course, international migration analysis will be limited to immigration since information on emigrants is not available.

In-migration rates and determinants analysis can be performed by reversing analysis time. I describe here the method in much the same terms as Béguy et al. (2010). It consists in running the time of analysis in reverse (Baydar and White 1988). This produces tables that will formally have the same structure and properties as decrement tables but which will be interpreted as increment tables. Analyzes in the preceding section are actually produced using this method. It allows conducting descriptive and multivariate analysis on the determinants of in-migration in the same way as for out-migration. For out-migration analysis, the starting time of analysis is often birth or any specific age (often 15 or 18) at which the migrant is likely to migrate of his/her own volition. For in-migration analysis, a specific age can also be used, but reversing time will prevent us from using date of death (the mirror equivalent of date of birth) as a starting time of analysis. This is because death occurs at very different ages and therefore would introduce unnecessary age heterogeneity in the analysis time. In addition, death is in most cases not independent from migration behavior. For these reasons, in order to produce age-specific in-migration rates, the analyst has to choose the age for starting the time in reverse, depending on the size of the population at risk at older ages and the scope of the analysis. In the DHS case, one

has to choose the upper age limit below that chosen for the sample selection (45 or lower instead of 50 for females, 55 or lower instead of 55 or 59 for males).

As mentioned earlier, analysis is limited by the unavailability of household characteristics and composition and other contextual variables at the time of migration. Education level might be used upon some hypothesis about the correspondence between age and level of education. For example, if completed primary education is the respondent's level of education declared at time of survey, then a reasonable assumption is to consider the respondent as being at school from age 6 to 12, if this is the age when primary education ends in the country, and attribute primary level to the respondent from age 12 onward. However, other individual time-varying characteristics, such as occupation, cannot be deduced from characteristics at the time of the survey.

Considering their limitations for migration analysis, most DHS users may prefer to use migration not as the dependent variable but rather as a determinant in fertility or child mortality analyses. It seems that migration has not been so often used as a determinant so far essentially because of technical constraints. Many early uses of migration in fertility or mortality were limited to migrant status in the destination area. Brockerhoff pioneered the comparison of migrants (differentiated by their origin) and non-migrants as regard to their fertility (Brockerhoff and Yang 1994) and mortality of their children (Brockerhoff 1994, 1995). Migrants were considered from the time they arrived at current place of residence and period in previous residence was discarded from analysis. In some other studies (e.g. Ssengonzi et al. 2002; Van de Poel et al. 2007) migration status is used directly as a determinant, without actually controlling for the duration in the current place of residence. In some others, the beginning of exposure time is compared with the time of migration to identify categories of migration exposure (e.g. Omariba and Boyle 2010). In yet other papers (e.g. Chattopadhyay et al. 2006), comparison is made between lifetime behavior and behavior prior to migration. However, these studies do not directly use migration as a time-varying covariate.

Now that time-varying covariates and left-censoring are easily handled with available statistical software, the entire risk period can be analyzed. The paper by Bocquier et al. (2011) on child mortality by area of residence is an example of such event history analysis on DHS data using the migration event as a time-varying covariate. The urban-rural differential was the main interest of this paper which concentrated its attention on urban-rural migration effects by comparing under-5 mortality before and after migration. However, urban-to-urban, rural-to-rural or more complex migration stream effects could as well be analyzed although not in all countries due to sampling issues (sample size and stratification: see above).

The limitations of migration as a determinant will be very similar to those listed above regarding migration analysis per se. The period of reference should be chosen with care and most covariates are not reliable to contextualize the period before migration. To note, these limitations are not particular to the migration variable. However imperfect the indicator may be, the use of migration as a determinant should be encouraged even if the focus is not on migration. Capturing changes in place of residence and the heterogeneity of respondents as regard to residency can only improve the quality of the demographic analysis. Neglecting this important heterogeneity in the life of respondents may actually bias effects of other determinants.

The Case for Health and Demographic Surveillance Systems

As much as a survey sample is meant to represent a (usually) national population, a health and demographic surveillance system (HDSS) is a "*geographically-defined population under continuous demographic monitoring with timely production of data on all births, deaths and migrations*" (INDEPTH founding documents, 1998, http://www.indepth-network.org/).

Originally implemented to collect demographic data on the catchment area of hospitals or dispensaries to complement public health data on specific diseases, HDSS objectives now go beyond finding the right denominator to computing epidemiological rates. In addition to providing information on the burden of diseases in the population, they serve as early alert systems and platforms to implement and evaluate the impact of health interventions, sometimes using randomization of cases and controls. Besides the continuous and exhaustive monitoring of vital and migration events, HDSS serve as sampling frames to draw samples for a range of health, economic, social and behavioral nested studies. Data collection rounds take place annually or even more frequently. Several years of continuous data collection are necessary for return to investment. HDSS are notoriously expensive to implement but are also irreplaceable tools for epidemiological, demographic and socio-economic studies.

HDSS are not valued for their representativeness but rather for their ability to generate reliable, longitudinal, community-based and well-contextualized health data. Here exemplarity takes over representativity. In a survey, the sampled population is drawn from a universe, which is the total targeted population. Each unit in this population is interchangeable and randomness of the draw ensures that sampled units taken as a whole represent the universe well. Confidence intervals are computed using simple and reasonable laws from the Gaussian family. These confidence intervals account for both sampling errors (associated with sample size, stratification, clustering, etc.) and data collection errors (due to respondents, interviewers, data entry clerks, etc.) as long as they are random, i.e. unbiased. In HDSS framework, the population of a geographically limited area is interviewed but is not meant to represent the whole population of a country. On the contrary, an HDSS is considered exemplar or illustrative of a particular, sometimes marginal situation, monitored through a careful examination of contextual, environmental and community-level information. HDSS are usually situated in deprived rural, semi-urban or urban areas. A given HDSS population is then considered as a unique draw from a hypothetical universe of all possible similarly deprived situations. The fact that the population follow-up is exhaustive does not mean that there is no random component in this population. Sampling errors are absent and random data collection errors are supposed to be reduced to a minimum through regular waves of data collection and complex consistency checks, but randomness may occur from behaviors themselves however close-to-perfect data collection may be. Therefore, confidence intervals are still needed though computation techniques may differ from sample analysis. Resampling methods (bootstrap, jackknife…) will be preferred to Gaussian-based methods.

Rather than aiming at representing the behavior of the whole population, HDSS aim at identifying causal relationships in sequences of events in great details, including for rare events (e.g. maternal death, neglected diseases) that hold in similar contexts. The incidence of an event is of higher interest in HDSS than the prevalence of this event. Also, the causal relationships between events at community, household and individual levels are of higher interest in HDSS than the precise description of each event at a given time. In other words, HDSS analysis seeks at generalizing processes rather than states. Moreover idiosyncrasy inherent to HDSS is compensated by comparative analyses of HDSS data, which is encouraged by a unique (in all acceptance of the term) network – the International Network for the continuous Demographic Evaluation of Populations and Their Health in developing countries (INDEPTH). Triangulation with administrative, hospital, census and survey data may also help generalization of HDSS results.

Migration Registration System and Their Limitations

As regard to migration, HDSS offer exceptionally rich data on residential history albeit limited to small populations. In principle, all residential

moves (changes of household) within the surveillance area are captured in addition to moves in and out of the surveillance area. The time criterion varies among HDSS from 1 month to 1 year. It is advisable to use less than 6-month criterion in the field, since 6-month duration tends to be the standard duration for residence in migration analysis.

At each round of data collection *n*, information on these moves is collected retrospectively covering the time since the last round *n-1*. Migration status of in- and out-migrants is confirmed at the following round $n + 1$. This is because of the so-called "hanging cases", i.e. when a person has been declared a migrant on the basis of intentions to leave or stay in the household but has not yet completed the minimum duration in or out of the household to be considered a true migrant. For this reason the data covered by the last round are usually discarded from analysis. Also, the migration status at the onset of surveillance is not often well-known for the whole population. Data covering events from initial census (i.e. round 0) to round 1 or even round 2 are usually not reliable and discarded from analysis. This is because migration is essential to define the population at risk. Unreliable residency status of individuals in the system creates a serious bias in the computation of the population at risk leading to the over- or underestimation of all demographic rates.

Another challenge can be "the reliable re-identification of an individual on in-migration as being the same person who previously moved out" in the same HDSS (Sankoh and Byass 2012). Within-HDSS moves were often ignored in identification system, leading to the attribution of two different identifiers for the same individual moving from one household to another. This double identification is not an issue as regard to computing the population at risk (there is no double count for the same time period) but this leads to several imprecisions in the analysis. Within-HDSS moves may be confused with migration in and out of the HDSS. The continuity in biographical record is artificially broken, leading to a loss of information. Extra time will be necessary to record information that was already asked to the respondent at former place of residence, leading to interviewer's and respondent's fatigue. Fortunately, procedures are now put in place among cooperating INDEPTH sites to avoid this type of double identification by asking precise questions aimed at reconciling identifiers.

Identification and understanding of migration processes are essential to both management and analysis of the whole data. Once precautions taken on the quality of information HDSS offer a unique tool to compute the complete basic demographic equation (mortality, fertility and migration rates) in countries where vital registration is lacking or deficient. HDSS can routinely produce a core minimum longitudinal microdataset containing all vital events for each individual under surveillance. This is sufficient to compute precise exposure and gross demographic rates as well as more complex statistics such as life tables, life expectancy, age-specific fertility rates, migratory and natural rate of increase, etc. Expanding this core longitudinal dataset with event attributes, other status event and individual, household and community characteristics enables more complex event history analysis.

Embedded in the INDEPTH network, the Multi-local Analysis of the Dynamics of Internal Migration And Health (MADIMAH) initiative follows this event history analysis (EHA) perspective and aimed at improving capacity of HDSS to produce the required datasets, i.e. at promoting EHA-oriented data management. This initiative contributed to the production of core longitudinal micro datasets containing all vital and migratory events (available for free-of-charge download through the iShare micro data repository platform, http://www.indepth-ishare.org/), as well as to the production of all mortality, fertility and migration indicators (available for display and for download through the INDEPTHStats aggregated data platform, www.indepth-ishare.org/indepthstats/).

However important is the monitoring of migration in HDSS, it must be acknowledged that migration has been rather neglected in the analysis of HDSS data. Despite the value of exhaustive recording of migration events over

the surveillance period, HDSS usually do not involve the collection of migration histories from birth to first enumeration (for those born before the surveillance started) or from birth to first in-migration. This has no implication on the computation of demographic rates over the surveillance period but it is a serious and often overlooked limitation as it prevents using migration history as a predictor of future migration. To note, the same problem arises in HDSS that do not record reproductive history, or union formation. Analysis of reproductive health determinants is then limited.

Another important limitation is to do with the time of data collection on contextual factors. Even though they are longitudinal data collection systems, HDSS are not free of the issue of temporal order of migration event vis-à-vis its covariates. In much the same way as for cross-sectional surveys, household or community (e.g. village) characteristics are often collected once every X years, the assumption being that these characteristics do not change much over time. However plausible this assumption is, collecting this kind of information every X years creates a discontinuity in the otherwise longitudinal nature of individual-level data. Dates of changes in household or community characteristics are not captured. Therefore, these changes often cannot be situated before or after demographic and other events in causal analysis thus limiting causal analysis. Assumption on the date of these changes can be made (e.g. by setting changes at the mid-period between two consecutive data collection on household or community characteristics) but this approximation is detrimental to the precision of the analysis.

What about geocoding and spatial analysis of HDSS? As Sankoh and Byass note (2012), "the technological and methodological possibilities for obtaining and using geographical data have advanced considerably, to the point where recording the latitude and longitude of every residential unit, and other salient features, in an HDSS using global positioning system (GPS) technology have become commonplace." Geocoding may not contribute as much to the analysis of migration in HDSS as it would at national level, since the geocoding pertains more to the determinants of migration than to migration events themselves. It certainly helps to get better precision as to the conditions prevailing in households under surveillance, but it does not help characterize places of destination or origin outside the HDSS. In other words, the type of external migration will not be better identified by more precise geocoding within the surveillance area. Geocoding of households and amenities contributes mainly to multilevel analysis since it allows the definition of more precise geographical layers and enhance the possibility to relate household data to some macro characteristics such as rainfall, temperature, etc.

Questions on the Circumstances of Migration

Because HDSS were not initially meant to study migration, information on origin and destination and reasons for migration is rarely collected from the onset of the surveillance, or not in a systematic way. Migration is still considered by many analysts as independent censoring, i.e. as attrition (loss-to-follow-up) or right-censoring in the case of out-migration, or its opposite, left-censoring in the case of in-migration. However, for migration to be considered as a mere censoring event one has to make the strong assumption that it is independent from the event at stake be it death, birth or any other event for that matter. This is contrary to what all migration analyzes show: migration is not random but often motivated by health, economic or social reasons. In sum, it must be acknowledged that migration is a major source of non-independent censoring, an issue that has not been seriously tackled so far in demography. Most analysts blithely consider attrition by migration as independent censoring in standard descriptive and analytical models, i.e. as a nuisance that reduces the population at risk in cohort studies.

To make progress in this matter, it is very important therefore to understand the circumstances of migration better, even to analyze other events than migration. Information on

origin and destination and reasons for migration is obviously crucial to analyze migration determinants per se, but it also helps identifying possible selection effects as regard to health and socio-economic events. The few studies on migration-health interactions reviewed in the following section show that behavioral variations by migration status are very high. These interactions have huge consequences on the measurement of demographic rates and, if not taken into account, they may bias the estimation of the effects of other determinants.

When information is collected on migrants, it is usually in the form a question on origin and destination if not on reasons for migration. Because HDSS are limited to small geographical areas, the responses (whether pre-coded or not) involve a hierarchy by geographical distance or by importance of the agglomeration at destination or origin. This hierarchy is particularly important to distinguish between migrants who cross HDSS site boundaries depending on whether they make a close or a distant move. Some migrants may just change residence to neighboring villages or city blocks that are more likely to share characteristics with their place of origin.

Sometimes international destination and origin are coded, which makes international migration analysis possible. It should however be noted that at a HDSS (small) geographical scale, international migration is in most cases too specific to the sites or too small in relative and absolute terms to be relevant at a larger (national) scale. International migration status, when there has been a massive immigration flow due to particular circumstances, may be used for analyzing social, economic or health integration as was done for example in Agincourt HDSS (South Africa) where there had been in the 1980s a major refugee flow from neighboring Mozambique.

Most of the above is relevant to take account of selectivity by in-migration. Selectivity by migration out of the HDSS is usually ignored though it may create a high bias, since out-migration can be regarded as informative censoring as mentioned above. Whereas questions may be asked to in-migrant respondents on their place of origin and the circumstances of their migration, little is known about the destination and circumstances of out-migrations. A great improvement to the analysis of migration determinants could be derived from more precise follow-up of migrants out of the HDSS. Follow-up could help in qualifying out-migration better by identifying out-migration determinants. Retrospective and prospective follow-up may be used to correct for migration bias in the analysis of population behavior. For example, case-control design can be implemented by comparing out-migrants with matched cases of non-migrants in the HDSS. This would help identifying how migration and other behaviors interact in time. Statistical modelling is a strategy to control for selection biases but will never beat hard data on household and migrants' behavior pre- and post-migration. Because mobile phones are now widely and cheaply available throughout the globe, including deprived rural areas, it would be possible to ask HDSS residents their phone number and that of their next of kin for further contact in case of migration. Conditional on respondent's approval, phone interview could be organized in the months following out-migration. This would allow collecting directly from the migrant information on migration circumstances, current living conditions and precise location of destination.

Existing and Potential Analyzes

The first initiative regarding analysis of migration determinants and consequences using HDSS data is found in the book "The Dynamics of Migration, Health and Livelihoods – INDEPTH Network perspectives" (Collinson et al. 2009). Summary of findings is available in Gerritsen et al. (2013). All seven participating sites in Africa and Asia showed a relatively regular age structure for migration favoring young adults (aged 20–24) most of them motivated by employment, but also by union formation or dissolution, and sometimes accompanied by their

young children. Retirement and access to better health services and care are also motivations at older ages. Return migration is more frequent for males.

A careful analysis of migration flows in Nairobi slums shows an annual turn-over of a quarter of the HDSS population and of a third of those aged 15–30 (Béguy et al. 2010). The circular migration system at play is becoming more intense for women than for men, explaining the long-term decline in male-to-female ratio. Analysis of in- and out-migration determinants show that the high population turn-over in slums is associated with insecurity of livelihoods and tenure, as well as with poor basic amenities and social services. The selection process by which migrants stay or leave urban and rural areas still need to be investigated by closer examination of objective and subjective determinants of migration.

Migration is often associated through remittances in money or in kind with educational improvement of children left at home (rural Bangladesh) or in socio-economic status of the household left behind at large (rural South Africa). How loss of labor employed in agriculture is compensated by remittances depends on the household land resources (rural Thailand).

The burden of child morbidity is higher when the migrating parent is the mother (rural Vietnam). Children born of newly resident mothers have higher mortality risks than those born of long-term migrants in urban slums in Kenya, but the opposite holds for returning migrant mothers from urban to rural areas in Kenya. More detailed analysis comparing children born in and out of the slums (Bocquier et al. 2011) showed that the slum-born have higher mortality than non slum-born, indicating long-term health consequences of delivering in the slums. Also, children born in Nairobi slums to women who were pregnant at the time of migration have the highest risk of dying.

For adults, mortality is higher for returning migrants, essentially because of AIDS/TB (rural Mozambique) thus confirming the "returning home to die" phenomenon observed in another HDSS in rural South Africa (Clark et al. 2007).

To sum up, the findings in the HDSS-based studies highlight the potential negative consequences of migration on health which contrast with the beneficial impacts of migration on livelihoods. What poor populations may economically gain from migration on one hand, they may lose in health on the other hand. The MADIMAH initiative, through analysis of strictly methods and comparable data gathered on a dozen of HDSS, seeks at confirming the direction of the relationships between migration, livelihood and health. A number of other issues are worth analyzing in relation to migration, both as a consequence and as a determinant: reproductive health and fertility, chronic diseases, aging, union formation, etc.

Conclusions

Demographic surveys and surveillance systems can be used for the analysis of migration both as a dependent and as an independent variable. However, a number of limitations have to be borne in mind before conducting both types of analysis. When dealing with last migration as in most surveys, it is important to limit the period of analysis to 3 years before the survey and to limit place of origin to large geographical areas in order to avoid biases. Analyses of interactions between migration and another event should check for the order of these events. When migration is a determinant, it should be a time-varying covariate, which can only improve quality of analysis. Also, information on origin and destination and reasons for migration are important for analysis, since migration is not a random event and is often motivated by health, economic and social issues. Migration is a major source of informative censoring, i.e. not independent from the other events of interest. Analysis should not eliminate migration, migration should rather illuminate analysis. Information prior to migration and follow-up after migration are important improvements that should be encouraged in existing demographic survey programs and surveillance systems.

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Migration Flows: Measurement, Analysis and Modeling

11

Frans Willekens

Introduction

Migration is a change of usual residence from one geographical unit (origin) to another (destination). The geographical unit is a village, county, municipality, province, country, urban area or any other administrative or functional area. A residence is typically a house or apartment. The distinction between internal and international migration is not important from a methodological point of view, although the monitoring and governance of these flows differ substantially. People migrate for various reasons: education, employment, marriage or cohabitation, living conditions, amenities, climate, security, etc. Each year, millions of people in the world decide or are forced to migrate. It results in flows of people moving from one settlement to another. The study of that flow is the subject of macro analysis of migration. The flow may be disaggregated by migrant characteristics to acknowledge the fact that some people are more likely to migrate than others. Common characteristics are age, sex, employment status and level of education. Flows may be further disaggregated by reason for migration to acknowledge the many types of migration. Marriage migration is very different from employment migration and migration for reason of education or climate. These different types of migration are usually not well documented in official statistics. Data on migrant characteristics and reasons for migration are commonly obtained in surveys and survey data on are not yet fully integrated into official statistics on migration. Because of data limitations, researchers often concentrate on the aggregate picture.

The structure of the chapter is as follows. Section "Issues in the measurement and analysis of migration" is a non-technical introduction to issues in migration analysis and modeling. A first issue concerns the appropriate measure of migration level. It is a measure that relates migration counts to (a) the population at risk of migration and (b) the duration at risk. The migration rate is such a measure. Most other measures can be derived from the migration rate. The second issue is migration measurement. Major sources of migration data are censuses, Civil Registration Systems, and sample surveys. They differ in ways migration is defined and measured. The definition of migration is closely related to its measurement. In each concept of migration, a temporal aspect and a spatial aspect can be distinguished. By situating migration in a space-time framework, different definitions and

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_11

measurements of migration can be compared and, if needed, reconciled.

Sections "Migration measures and migration models" and "Modeling migration flows by origin and destination" cover migration measures and migration models in more detail. Different measures of migration level are presented in section "Migration measures and migration models". Some measures can be derived directly from the data, while other measures require migration models. The Poisson model has become popular in migration research. It is explained why. The Poisson model is also a bridge to statistical modeling of migration using the recent theory of counting processes. The section "Modeling migration flows by origin and destination" focuses on migration flows by origin and destination. Models of migration by origin and destination belong to the class of spatial interaction models, which are also applied in studies of trade, transportation and flows of ideas. Spatial interaction models evolved from the gravity model that applies principles and laws of physics to society (see the chapters by Greenwood (Chap. 3) and Wright and Ellis (Chap. 2) in this volume). The 'laws of physics' were later replaced by behavioural mechanisms. Along that development path it was realized that migration and geographical mobility have much in common with social mobility, conceptually and analytically. That led to a rich class of mobility models rooted more explicitly in probability theory. Theories of behaviour, probability theory and the theory of statistical inference significantly influenced models of migration but they did not change the basic structure of the models that accounts for push factors, pull factors and intervening factors that stimulate or inhibit migration.

Migration is interwoven with other events in the human life cycle. Since people are more mobile in some life stages than in other stages, there is a characteristic age pattern of migration. This regularity can be modeled. The regularity in spatial patterns of migration can be modeled too. These models can be used to compare migration patterns or to infer missing data. Section "Modeling migration age profiles" covers models of age schedules.

Migration is an important driver of population change. Many population projection models consider migration, either net migration or gross migration flows, in addition to fertility and mortality. Projection models describe demographic consequences of migration, fertility and mortality. Projection models can inform policy. From projection models, policy models have been derived to estimate migration flows that would be required in order to achieve a desired population size and composition. The migration flows may not be realistic, implying that the targets are beyond reach. Projection models and policy models are the subject of section "Migration, population growth and population distribution". Section "Conclusion: Issues for the future" concludes the chapter.

Issues in the Measurement and Analysis of Migration

Migration is an event and the person migrating is a migrant. The distinction between the event and the person experiencing the event, or between migration and migrant has a long history (Courgeau 1973a). The distinction is essential for understanding the migration process and to interpret migration statistics. The distinction is important in this chapter too. The event must be properly defined. Any migration involves relocation but not all relocations are migrations. Travel, commuting, temporarily changes of address (e.g. to summer residence or for temporary work) and permanent change of address are relocations. Migration is a relocation that involves a change of usual residence (address). Not all changes of usual residence are migrations. Migration is a change of usual residence beyond a migration-defining boundary. The geographical unit may be a village, a town, a district, an agglomeration, an urban or rural area, or a country. The boundary-crossing criterion distinguishes a migratory move from a mere change of residence (for a discussion, see Montgomery et al. in this volume). The definition of migration involves a spatial and a temporal dimension. It is often not possible to measure the

usual residence directly. In that case it is approximated by an intended duration of stay or an actual duration of residence. It leads to the concepts of temporal and permanent migration. For international migration, the United Nations recommends defining a migrant as a person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residence (United Nations 1998: Box 1 on p. 18). A short-term migrant should be defined as a person who moves to a country other than that of his or her usual residence for a period of at least 3 months but less than a year (12 months) except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage (United Nations 1998: Box 1 on p. 18). Relocation beyond an administrative boundary may involve a change of address without meeting the duration criterion and is therefore not viewed as a migration. The United Nations coordinates the definition of an international migrant with that of an international tourist or visitor, who is a person who travels to a country other than where he has his usual residence for a period not exceeding 12 months for reasons other than exercising an activity remunerated from within the country visited. No simple rules exist to define and measure migration. As a result, rules differ between countries. Several efforts are underway to harmonize migration statistics, either directly by harmonization of data collection, or indirectly by modeling migration.

A major problem in migration studies is the confusion that exists between concept and measurement (See also the appendix in the Chap. 26 by Montgomery et al.). For practical reasons migration is often defined in terms of its measurement. In a population census, which occurs typically every 10 years, the usual residence is recorded at time of census. Most censuses record in addition the usual residence at some prior date, usually 5 years prior to the census. In that case, migration is measured by comparing addresses at two points in time, e.g. 5 years apart. Some countries use a reference period of 1 year and some use a variable reference period, e.g. when they use as the prior date the date of the previous census or the date of birth. Effects of differences in length of the reference period have occupied researchers for years (see below). Counting persons whose address at the end of a reference period differs from that at the beginning of the period disregards multiple changes of address during the reference period. Some censuses collect information on the last migration and record the duration of current residence.

In Civil Registration Systems (CRS), a person's address is stored in a database for administrative purposes. The United Nations defines civil registration as the continuous, permanent, compulsory and universal recording of the occurrence and characteristics of vital events pertaining to the population as provided through decree or regulation in accordance with the legal requirements of a country.[1] Civil registration is carried out primarily for the purpose of establishing legal documents. These records are also a main source of vital statistics. Local authorities are usually responsible for keeping civil registration up-to-date. Persons are required to report a change of address to the local authorities.

Migration counts derived from a population census and counts from a CRS may differ considerably. These differences and the different measurements used in a census complicate a comparative analysis of migration levels. For the purpose of migration modeling CRS data may be viewed as resulting from a measurement scheme that uses a reference period too, but a reference period that is infinitesimally small. An interval is infinitesimally small if at most one event occurs during the interval. From that perspective, a CRS measures migration in continuous time, whereas a census measures migration in discrete time or time intervals.

The distinction between continuous and discrete time is crucial for migration modeling, as

[1] http://unstats.un.org/unsd/demographic/sources/civilreg/ (Accessed 5th July 2014).

will be shown below. In the literature, migration data collected in continuous time are sometimes referred to as movement data and migration data collected in discrete time as transition data (Ledent 1980; Rees and Willekens 1986). Some authors refer to direct transitions (continuous time) and discrete-time transitions (discrete time), and event data and status data (Willekens 2008). The different ways of measuring migration lead to different data types. The distinction between the event-based approach and the status-based approach has been accepted in the literature as a basis for a typology of data types associated with the measurement of migration (see e.g., Rees and Willekens 1986; Bell et al. 2002: 437).

Both events (migrations) and persons (migrants) have characteristics and these should be kept separate. Characteristics of a migration include the origin and destination of migration, and the reason for migration. Examples include rural-urban migration, international migration by country of origin and country of destination, marriage migration, family reunion, job-related migration and forced migration. Age, sex, level of education, marital status, employment status, country of birth and country of residence at a given time are characteristics of a migrant. In census data, the destination is the current place of residence, which is also a characteristic of the person who migrates, i.e., the migrant.

Characteristics of migrations and migrants are specified at the individual level. An individual occupies an address and has a set of attributes. An individual migrating has an origin and a destination. Aggregation of individual data to the population level usually results in cross-tabulations or tables with two or more dimensions. The multidimensional tables exhibit a *data structure*. Particularly relevant in migration research are the age structure and the spatial structure. The spatial structure relates to the origins and destinations of migrations. When residents of a given area of origin are more likely to move to a particular destination rather than to another destination, a spatial dependency exists. Spatial dependencies generate spatial structure. If migration is concentrated in a few flows (*migration corridors*), the spatial dependency is referred to as spatial focus. The spatial focus is measured using a variety of indices to capture the extent to which migration flows between regions are concentrated or dispersed (Plane and Mulligan 1997; Rogers and Sweeney 1998; Rogers and Raymer 1998). The study of spatial focus includes the spatial dominance exerted in varying degrees by destinations on origins (Pooler 1992). The statistical modeling framework proposed in this chapter is a generic approach to spatial dependencies and spatial structures. It captures the main features of the approach proposed by Willekens (1994) and Rogers et al. (2003a).

Age structure and spatial structure call for different modeling approaches, although the approaches may be logically integrated in the comprehensive framework. Age structure is a type of duration dependence and may be modeled by duration models or survival models. The Rogers-Castro model migration schedule is an example of a duration model (Rogers and Castro 1981). It describes how migration intensities vary with time since birth (age). Spatial interaction models capture the spatial structure. Conventional spatial interaction models, such as the gravity model, capture the effects of distance on the level and direction of migration flows (see e.g., Mueser 1989; Sen and Smith 1995). Most spatial interaction models today include other variables. They are derived from a range of migration theories that express in different ways that opportunities are distributed unevenly in geographical space and that the *geography of opportunities* is the root cause of migration and the perpetuation or persistence of migration flows (Massey et al. 1998; Massey 2008). The theories also identify types and effects of barriers and facilitators.

A unified perspective on migration modeling has four significant advantages. First, it provides a single, comprehensive framework for the *analysis of data* on migration. Second, it provides a framework for the *harmonization of migration statistics*. Third, it provides a framework for the *prediction* (*estimation*) *of missing data on migration*. The prediction of a missing values is similar

to the imputation of missing values. A fourth advantage of a unified perspective is that seemingly different migration models may be grouped into classes of models. A unified perspective cannot prevent that some migrants are left out because of data limitations. For instance, undocumented migrants are disregarded if they are not included in the data.

A critical issue in migration modeling is the development of a proper indicator of the level of migration. The indicator is typically the dependent variable in migration models. It is the variable to be predicted. The number of migrations or migrants during a reference period is not an adequate measure of level of migration. A modest propensity to migrate and a large population in the sending area may produce the same migration flow as a high propensity to migrate and a modest population size. The indicator of migration level should therefore control for differences in population size in origin areas. It should also control for individual differences in durations of exposure to the risk of migration. That requires individual data, i.e. micro-data. Consider urban residents. Some residents spent their entire life in urban areas; they accumulated a long duration of exposure to the risk of migration to rural areas. Other urban residents arrived recently; they accumulated a short period of exposure. An accurate measure of migration level should therefore relate migration counts to number of persons at risk of migration, each person weighted by the duration at risk of migration. That measure is the migration rate. Since it is the ratio of the number of occurrences of migration during the reference period and the total duration of exposure during that same period, the rate is known as the *occurrence-exposure rate*. The rate is common in demography (see e.g. Preston et al. 2001, p. 19). If individual durations at risk are known or can be approximated, the occurrence-exposure rate is the proper dependent variable of migration models. It is an adequate measure of the migration level during the reference period. Some authors would argue that using the occurrence-exposure rate as the dependent variable assumes that the migration rate is constant during the reference period, but that migration rates vary. The argument is particularly valid if the reference period is long, e.g. 5 years. In addition, individuals may change attributes during the reference period. For instance, a marriage during the reference period has an independent effect on the propensity to migrate. An occurrence-exposure rate estimated for the entire period cannot accommodate the changing propensity to migrate following marriage. One answer to that problem is to divide the reference period in sub-periods (e.g. before marriage and after marriage) and to estimate the migration rate for each sub-period. That is basically episode-splitting, an established technique in event history analysis (see e.g. Blossfeld and Rohwer 2002, pp. 140ff). The technique assumes that the migration rate is constant during the interval but the value depends on the marital status. To get the different values, events are counted and durations at risk determined for non-married and married persons separately. If migration rates depend on marital status and marriages may occur anytime during a reference period, episode splitting is required to determine the correct number of migrations and duration at risk. An alternative answer is to do away with the reference period and to measure the migration rate any time an individual migrates. When one person migrates, the migration rate is one (the occurrence of one event) over the number of persons at risk of migration at that particular time. The migration level in a population during a time interval is the cumulative migration rate, i.e. the sum of the individual migration rates during that interval. This approach to estimating migration rates is common in biostatistics. It is essentially the Nelson-Aalen estimator of migration rates (see e.g. Aalen et al. 2008, pp. 70ff). No assumption is required on the pattern of change of the migration rate during the interval and covariates can easily be taken into account. Notice that the occurrence-exposure rate tends to the Nelson-Aalen estimator if the reference period becomes infinitesimally small.

The method for estimating the migration rate, described in the previous paragraph, requires individual data and a precise measurement of the date or age of migration. The data

requirement is fulfilled in a reliable Civil Registration System and may be fulfilled in some sample surveys, in particular in longitudinal studies. The CRS data are never published, however, at that level of detail. Published data usually consist of migrations (event counts) during a reference period and the population size at the beginning and the end of the period. If the reference period is short, e.g. 1 year, multiplying the mid-period population and the length of the reference period is a good approximation of the duration of exposure. It is common practice if a CRS is the source of migration data. In censuses, individual data are available but the migration dates are not known. The census may provide information on the place of usual residence on census night and the place of usual residence at some time prior to the census, e.g. 5 years prior to the census. If the places differ, a migration is measured. Multiple migrations during the interval cannot be identified and, if the most recent migration is a return migration, no migration is measured at all. One approach, which is practiced but is not correct, is to assume that not more than one migration occurs during the reference period and to estimate the occurrence-exposure rate by dividing the number of 'migrations' by the mid-period population, multiplied by the length of the reference period.

The correct approach is to replace the migration rate as the dependent variable of a migration model with the discrete-time probability of a change in usual residence. The migration model becomes a (multinomial) logit model, which is equivalent to a logistic regression model. An estimator of the probability is the proportion of individuals in a sending area **at the start** of the reference period that resides in a given destination area at the end of the reference period. In the statistical literature the discrete-time probability is known as transition probability. Notice that in a census or retrospective survey, individuals who reside in the sending area at the start of the reference period but die or are otherwise lost to observation, are not included. As a consequence, the estimate is a conditional migration probability. It is conditional on survival and not being lost to observation for another reason. If the reference period is not long (e.g. 1 year) and the assumption of constant occurrence-exposure rates during the interval is acceptable, occurrence-exposure rates may be estimated from transition rates using a method proposed by Singer and Spilerman (1979) for longitudinal data (Willekens 2008, p. 136).

Migration Measures and Migration Models

Migration counts and migration rates measure the level of migration. The level of migration indicates the prevalence of migration in a population. The migration count is the number of migrations in a given period. That number depends on the length of the period and the size of the population. To compare migration levels across populations, the migration count should be related to the total population and the average duration at risk, which results in a migration rate. The migration rate has also been referred to as the Crude Migration Intensity (CMI) (see e.g. Bell and Muhidin 2009; Courgeau et al. 2012). Counts do not correct for population size, but rates do. Migration rates may be used to determine whether a population is more mobile than another population, or whether the migration level increases in time. Other measures of migration level are migration probability and expected number of migrations in a lifetime. Both measures can be derived from the migration rate. The migration probability is the probability of at least one migration during a reference period. Let μ denote the migration rate and assume that the rate does not change in the reference period. Let t denote time since the beginning of an interval. A person who does not experience a migration before time t is called a stayer. The probability of being a stayer at time t is the survival function $\exp[-\mu t]$. If the migration rate is constant the survival function is exponential. The shape of the survival function depends on the time dependence of the migration rate. If the rate is not constant but the propensity to migrate declines exponentially with duration of stay, then the survival function is a Gompertz function. The probability of at least one migration

between the onset of the reference period and time t is $1 - \exp[-\mu t]$. One may also use the probability of one, two, three and more migrations during the reference period as measures of migration level. If the migration rate is constant, the Poisson model gives the probability of a given number of migrations. The probability of observing n migrations during an interval of unit length is $\Pr\{N = n\} = \frac{\mu^n}{n!}\exp[-\mu]$, where N is a random variable denoting number of migrations and n! denotes the factorial of n.

A Poisson process is a counting process and the model of that counting process, i.e. the Poisson model, is a candidate for modeling count data. The Poisson model is used widely in migration research. As early as 1982, Flowerdew and Aitkin (1982) argued that migration models should be based on the Poisson process and the Poisson distribution rather than on the Gaussian process and the normal distribution because migration data are count data (see also Boyle et al. 1998, p. 47 and Flowerdew 2010). The Poisson model is a probability model of a counting process. The model assumes that events occur randomly, independently of each other and at a constant rate. The Poisson model has a single parameter: the mean of the distribution. The variance is equal to the mean. The mean is the *expected* number of migrations during a unit time interval.

The parameter of the Poisson model may depend on covariates, unobserved heterogeneity, and contextual variables (see e.g. Aalen et al. 2008). Consider covariates. A Poisson regression relates the parameter to covariates or predictors of the migration rate. The Poisson regression model may be written as a log-linear model: $\ln\mu = \beta_0 + \beta_1 Z_1 + \beta_2 Z_2 + \ldots$, where Z_i is the value of a predictor variable and β_i is the regression coefficient associated with Z_i. The regression coefficient measures the effect of a unit change in the predictor variable on the logarithm of the migration rate. β_0 is the intercept. The Poisson regression model has the added advantage that the dependent variable cannot be negative, which is convenient because counts are necessarily nonnegative. The Poisson process is a well-known example of a counting process; it is widely used in the modeling of event occurrences and event histories. A counting process arises by counting number of occurrences. During the past two decades the theory of counting processes developed into a main theory for modeling count data in survival and event history analysis. For a good and up-to-date introduction to the statistical theory, see Aalen et al. (2008). Application of counting process theory in migration research is yet limited, but is likely to increase in the future.

An interesting measure of the level of migration is the expected number of migrations in a lifetime. It is derived from the migration rate. If the migration rate is constant throughout the life span, then the expected number of migrations is equal to the migration rate times the life expectancy. The assumption of constant migration rate is unrealistic, however. If migration rates vary with age, the expected number of migrations in a lifetime is the sum of age-specific migration rates, weighted by the expected number of years exposed to the risk of migration at each age. It is the area under the age curve of migration rates. The measure is analogous to the Net Reproduction Rate, which also measures the expected number of events (female births) in a lifetime, weighted by the duration of exposure at each age (see Preston et al. 2001, p. 113).

Another informative measure is the expected duration of stay. It is derived from the probability of stay, which is itself derived from the migration rate (see above). If the probability of stay is determined for all possible values of t, then the expected duration of stay is the area under the probability curve.

The migration effectiveness index (MEI) is used to measure the efficiency of migration as a mechanism of population redistribution. It is the ratio of net in-migration and the sum of in- and outmigration (migration turnover). Its value ranges from 0 to 1. A high in-migration and a low outmigration result in substantial population redistribution relative to migration turnover or a high net effect relative to the volume of movement. Hence the effectiveness is high. Bell and Muhidin (2009) use the MEI for cross-national comparison of internal migration.

The number of migrations during a reference period depends on the length of the reference period. Effects of differences in length of the reference period have occupied researchers for years (see e.g., Long and Boertlein 1981; Kitsul and Philipov 1981; Courgeau 1982; Rogers et al. 2003b). To determine whether one population is more mobile than another population, a measure of migration is needed that is insensitive to differences in population size and length of reference period. The migration rate is such a measure. Consider a closed multiregional system and suppose that the census records a population of 20 million, of which 1 million (5 %) resided 5 years prior to the census in a region different from the region of residence at time of the census. In the absence of births and deaths, the total duration of exposure is $20*5 = 100$ million person-years. A migration rate of 0.01 (1 million divided by 100 million) underestimates the migration level. It assumes at most one migration during the 5-year interval. The observation is the proportion of residents 5 years prior to the census that reside in another region at census date. That proportion is an estimator of the migration probability $1 - \exp[-5\mu]$, where μ is the migration rate. A better estimate of the migration rate is therefore $\hat{\mu} = -\ln(1 - 0.05)/5 = 0.01026$. The probability that an individual with a different residence at census date migrated more than once during the period of 5 years is a little over 2 %. It is ratio of the probability of two or more migrations, estimated by the Poisson model, and the probability of at least one migration. The estimation assumes that a return migration is not more likely than other migrations. If return migration is more likely (not an unreasonable possibility), then the underestimation of the migration level is even higher.

The number of migrations also depends on the size of geographical units. People are more likely to cross the boundaries of small units than those of large units. If units are large, most relocations will be within the unit, for the simple reason that most relocations are over short distance. To measure the effect of the relative size of spatial units on the level of migration, Courgeau (1973b, 1988) proposed a simple relation between the migration rate and the number of regions: $CMI = k\log(g^2)$, where g is the number of geographical units. The coefficient k, which is estimated using a regression model, measures the importance of long-distance relative to short-distance migration. If k is high, the migration rate increases rapidly with the number of spatial units. If it is low, the migration rate increases slowly, meaning that the effect of distance is low. Using the IPUMS database of censuses of countries around the world, maintained by the University of Minnesota (see the Chap. 8 by Sobek), Bell and Muhidin (2009, 2011) estimated the Courgeau index k for 28 countries and found that it is a powerful measure to transcend differences in spatial units.

Modeling Migration Flows by Origin and Destination

The level of migration of a region is often measured in terms of net migration, i.e. the difference between inflows and outflows. Net migration gives a good indication of population redistribution resulting from migration. That explains the use of net migration in population projection models. Trends in net migration are easier to extrapolate than trends in gross migration flows. However, they are more difficult to explain and a population at risk cannot be determined. In his paper *Requiem for the net migrant*, Rogers (1990) states that the net migrant is a nonexistent category of individuals. Individuals move in and out or arrive and leave. In order to relate migration at the population level to individual behaviour, gross migration flows should be considered. In this section I present models of gross migration between geographical units. The units may be village, municipalities, counties, provinces, countries or any administrative or functional unit. For convenience, I label the unit as region. A system of regions is the set of regions related by migration. For instance, counties form a system of regions. Provinces form another system of regions. A person with a usual residence in one region may migrate to

any of the other regions. The origin region will be denoted by i and the destination region by j. In some applications it is useful to distinguish two components in a migration from i to j. The first is leaving i, irrespective of the destination. The second is moving to j, conditional on leaving i. The first component, which in the literature is referred to as the generation component, is likely to be influenced more strongly by push factors, whereas the second component, which is the distribution component, depends more on pull factors. If pull factors do not target particular sending regions but have similar effects on all sending regions, then the generation and distribution components may be studied separately without major problems. Some models of migration by origin and destination have the separate treatment of the two components built in. For instance, in the migrant pool model the total number of outmigrations is estimated from population sizes in origin regions and outmigration rates. That total, which is the migrant pool, is subsequently distributed over the possible destinations using a simple distribution function or another mechanism to allocate or assign migrants to destinations (Willekens 2008, p. 122).

The oldest model of aggregate migration flows is the gravity model. The model is derived from Newton's law of gravity, which states that the gravitational force (attraction) between two objects is directly proportional to their masses and inversely proportional to the square of the distance between them. In the 1940s Zipf (1946) used the gravity model to predict migration between cities. Zipf's formulation is widely accepted as the basic specification of the gravity model: $M_{ij} = k\frac{P_i P_j}{d_{ij}^b}$, where P_i is the population in i, P_j the population in j and d_{ij} is the distance between i and j; k and b are parameters to be estimated from migration data. The model is consistent with Ravenstein's 'laws' of migration, which state, among other things, that the migration between two places is proportional to the population size of each place and inversely related to distance (See e.g. Boyle et al. 1998, p. 60 and the Chap. 2 by Wright and Ellis). A few years earlier, Stouffer (1940) proposed that the number of persons going a given distance is directly proportional to the number of opportunities at the destination and inversely proportional to the number of intervening opportunities. In contrast to Zipf, Stouffer argued that the volume of migration has less to do with distance and population totals than with the opportunities in each location. The widely cited theory of migration by Lee (1966), who distinguishes push factors, pull factors and intervening obstacles, is inspired by Stouffer. He acknowledges it when he states: "Perhaps the best known recent theories of migration is the Stouffer's theory of intervening opportunities." (Lee 1966, p. 49).

To express the concern that not population as such determines the volume of migration but that population size is a proxy of opportunities, the gravity model may be rewritten as $M_{ij} = k\frac{P_i^{\alpha} P^{\beta}{}_j}{d_{ij}^{\gamma}}$, with α, β and γ coefficients to be estimated. The model may be rewritten as $\ln M_{ij} = \ln(k) + \alpha \ln(P_i) + \beta \ln(P_j) - \gamma \ln(d_{ij})$ and estimated using Ordinary Least Square (OLS), assuming that the volume of migration is normally distributed around its mean value, or using a Poisson regression model for reasons given above. For an implementation of this model, see Boyle et al. (1998, p. 49). For an extensive discussion of the gravity model and its extensions, see Sen and Smith (1995).

Stouffer rightly observes that a theory that explains migration in terms of distance only is flawed. Other factors, such as road infrastructure, travel costs and intervening opportunities and obstacles influence the effect of distance. Some factors act as barriers, for instance differences in language, the need for a visa, or a valid residence permit, including city residence permits such as *hukou* in China and *propiska* in Russia. Snickers and Weibull (1977) found that historical migration patterns are much better indicators of separation of two locations than any measure of distance. Since the publication of that article, authors started to use historical migration matrices instead of distance measures. The rationale is

that historical migration flows measure revealed preferences and ties between locations. Historical migration flows may also be used when recent data on migration flows by origin and destination are missing, provided spatial patterns of migration are stable. In that case, recent data on aggregate measures of migration, such as net migration, or arrivals and departures, may be combined with historical data to obtain estimates of recent migration flows by origin and destination. The stability of the spatial structure of migration over extended periods of time has been demonstrated for a number of countries (see e.g. Baydar 1983; Baydar and Willekens 1986; Mueser 1989; Raymer and Giulietti 2010). The approach to combining data may involve a combination of data from different sources. Wetrogan and Long (1990) combine data from three sources in the United States: the census, the Current Population Survey and tax records. Raymer et al. (2007, 2011a, b) combine census data and registration data of England.

It is useful to view the method of using historical migration flows as an extension of a spatial interaction model or gravity model. The populations at origin and destination are replaced by recent data on departures and arrivals and the distance matrix is replaced by a historical migration matrix. Consider migration during a recent period. The flow may be described by a model that is essentially a spatial interaction model. The model is: $M_{ij} = \nu\, \nu_i^O\, \nu_j^D\, \nu_{ij}^{OD}$, where ν is an overall scaling factor representing the effect of the overall level of migration on the migration from origin (O) i to destination (D) j, ν_i^O is the effect of the migration count out of i on the migration from i to j, ν_j^D is the effect of number of migrations with j as destination on the migration flow from i to j, and ν_{ij}^{OD} represents the part or the (i,j)-migration that cannot be attributed to size effects (overall level of migration, departures from i and arrivals in j). ν_{ij}^{OD} is larger than one if more residents of i migrate to j than can be expected on the basis of the number of people that leave i and number of people that enter j. It expresses a preference of i-residents for region j or ties between i and j. The effects are multiplicative. The model may be rewritten as a log-linear model: $\ln M_{ij} = \lambda + \lambda_i^O + \lambda_j^D + \lambda_{ij}^{OD}$. Log-linear models are probability models and are widely used to examine the relationship between categorical variables. They belong to the class of generalized linear models (McCullagh and Nelder 1989). More importantly, the log-linear model is a Poisson regression model. The migration count is the outcome of independent and identical Poisson processes and it follows a Poisson distribution. Willekens (1983) showed that spatial interaction models are log-linear models. Writing a spatial interaction model as a log-linear model enhances interpretation and opens new perspectives for statistical modeling of migration flows when data are complete or incomplete (see e.g. Willekens 2008). For instance the interaction effect of a log-linear model λ_{ij}^{OD} measures the preference residents of region i have for region j. The measure is based on migration data only. It is the logarithm of an odds ratio: the odds of moving to j from i divided by the odds of moving to j from the reference region, i.e. the region that is selected as the reference. The odds ratio measures the preference a resident of i has for j relative to the preference of a resident of the reference region for j.

The measure differs from the migration preference index, which was first suggested by Bachi in 1957 and is sometimes used in migration studies (see e.g. Shryock and Siegel 1980, p. 656). The preference index is the ratio of the number of migrations between i and j and the number that could be expected on the basis of the population sizes of i and j (and not on the basis of departures and arrivals). It is M_{ij}/M_{ij}^*, where $M_{ij}^* = p\frac{P_j}{P_+ - P_i}P_i$, where P_i is the population in region i, p is the proportion of the total population in the county (P_+) that is an interregional migrant (irrespective of origin), and the second term is the share of j in the population outside of i. The product $p*P_i$ is an estimate of the interregional outmigration from i. The second term is an estimate of the probability that j is the destination of an outmigration from i. Notice that distance or intervening factors

are not considered in the migration preference index, nor in the log-linear model.

If recent migration flow data are not available, they may be estimated from available aggregate data on migration and historical migration flow data, e.g. from a census. The historical matrix serves as an initial guess of migrations between origins and destinations. The model may be written as: $E\left[M_{ij}\right] = \alpha_i \beta_j M_{ij}^0$, where M_{ij}^0 is the historical migration matrix, $E[M_{ij}]$ is the expected value of the migration flow from i to j, and α_i and β_j are parameters to be estimated. The model may be written as a log-linear model with offset: $E\left[M_{ij}\right] = M_{ij}^0 \exp\left[\lambda^* + \lambda_i^{O*} + \lambda_j^{D*}\right]$. The historical migration flow acts as prior estimate of migration. The model produces predictions of migration that best reflect the historical flows given that they must satisfy known margins (arrivals and departures). If in the historical migration flow the diagonal is missing, i.e. intra-regional migrations are omitted, then the diagonal is also missing in the predicted flow. The parameters are obtained by an iterative procedure involving adjustment of migration flows in the historical matrix to the recent count data on arrivals and departures. The method is commonly known as iterative proportional fitting, but is also known as biproportional adjustment method. The method preserves the interaction effect λ_{ij}^{OD}. In other words, the matrix of expected values of recent migration flows (predicted migration flows) has the same odds ratios as the historical migration matrix. The estimation method is adequate if the relative preferences for destinations are stable. The overall effect and the main effects depend on the recent data on migration. An important advantage of the log-linear model is that it identifies the relative contribution of data sources to predicted migration flows. The iterative proportional fitting method is used widely. Recently, Abel (2013) used the method to estimate global migration flows from place of birth data.

Recently, Brierly et al. (2008) proposed a Bayesian modeling framework for generating predictions of migration flows and they apply Markov Chain Monte Carlo (MCMC) techniques to obtain the predictions. The Bayesian framework is a natural way to combine multiple data sources, with different levels of errors, and prior information about the spatial structure of migration into a single prediction with an associated measure of uncertainty. Raymer et al. (2013) mention two important advantages of adopting a Bayesian approach in the context of estimating migration flows. First, the methodology offers a coherent probabilistic mechanism for describing various sources of uncertainty contained in the migration process, the migration model, the model parameters, and the prior information. Second, the methodology provides a formal mechanism for the inclusion of expert judgment to supplement deficient migration data.

The migrant pool model (see above), which is much used in regional population projections, is a special case of the origin-destination migration flow model: the origin-destination interaction is removed. The migrant pool model may be written as an unsaturated log-linear model if intra-regional migrations are considered or a quasi-independence model if intra-regional migrations are omitted (diagonal is zero). In the migrant pool model, migration is projected in two stages. The first stage is the projection of the number of out-migrants from each region. The migrants are placed in a common pool. In the second stage, the migrants in the pool are distributed over the possible destinations, using a distribution function that depends on the destination but not on the origin.

Modeling Migration Age Profiles

Rogers and Castro (1981) found that the age profiles of migration all over the world exhibit a remarkable empirical regularity. Migration rates of adolescents and young adults increase with age starting around age 15 and reach a peak around age 22, after which the rates decline slowly to the age of retirement. The migration rates of infants and children mirror the rates of their parents in their 20s or early 30s. Around retirement age, migration rates first increase and later decline when persons reach old age. The age

profile points to a strong age selectivity of migration. The age selectivity is a consequence of close links between migration and life events, such as entry into the labour market, marriage or cohabitation, divorce, childbirth and retirement. Transitions in the life course are moments of elevated risk of migration. The empirical regularity motivated Rogers and colleagues to model the migration age profile. The declining migration rates during childhood ages (pre-labour force ages) are described by a negative exponential curve. The increase and subsequent decline in migration rates at adult ages (labour-force ages) are described by a skewed bell-shaped distribution. The skewed distribution is used because the migration rates increase relatively rapidly during young adulthood and decline slowly after the peak migration rate around age 22. Several probability distributions exist that are bell-shaped and skewed. Rogers selected the double exponential distribution because the curve was used by Coale and McNeil (1972) to describe first marriage and by other authors to model fertility. If the propensity to migrate is high around the age of first marriage or union formation, then one may expect the age pattern of migration during young adulthood to be close to the age pattern of first marriage or union formation. The increase and subsequent decline of migration rates around retirement age (post-labour force ages) are also described by a double exponential distribution. The model migration schedule is composed of three curves. A scaling factor is added to allow for differences in level of migration. The double exponential is a function in four parameters: $a\exp\{-\alpha(x-\mu)-\exp[-\lambda(x-\mu)]\}$. Age is denoted by x. The parameter a is a level parameter and μ positions the unimodel curve on the age axis. The other parameters are shape parameters: λ reflects the steepness of the ascending side of the curve and α reflects the steepness of the descending side. Notice that, if the lowest age is taken to be 15, then 15 should be added to μ to obtain the age around which the curve is centered. If $\lambda > \alpha$, the mode of the curve is larger than μ. If $\lambda < \alpha$, the mode is smaller than μ. For a recent presentation of the model, a discussion and several illustrations, see Raymer and Rogers (2008).

Migration, Population Growth and Population Distribution

The distribution of a population in a system of regions is the result of regional differences in fertility, mortality, and migration. The contribution of migration to population growth relative to natural increase is a subject of ongoing debate. Countries and regions with low fertility see their population growth decline unless net migration is sufficiently high. For instance, in the European Union, natural population increase declined from 7 per thousand in the 1960 to below 1 per thousand in 2003. Since the early 1990s migration is the dominant component of population change. At the national and, more importantly, at the subnational level, the contribution of migration relative to natural increase can be substantial. Consider Germany. In 2010 the population (82 million) decreased by 180 thousand because of low fertility. During the same year, net migration was 130 thousand. The result was a modest population decline of 50 thousand. In Bulgaria and Romania the population declines because of low fertility **and** net outmigration.

A parallel debate also exists with respect to urbanization. Urban growth and urbanization are consequences of migration and natural population increase. The contribution of migration to urban growth varies between countries. In many countries, natural increase accounts for 60 % or more of urban population growth, but in China migration is a much more important component (United Nations 2012). In this section, simple models are presented to assess the effect of migration on population change. The models are used to determine the level of migration required to offset low fertility and/or to maintain a desired composition or distribution of the population.

In 2001, the United Nations (2001) introduced the concept of replacement migration to stimulate the international migration debate. Replacement migration refers to the migration that a country

(or region) would need to offset population decline (and population ageing) resulting from low fertility. The United Nations found that, to offset population decline and, in particular, population ageing, large numbers of immigrants are needed. In 2011 the World Economic Forum released figures on the number of additional workers needed by the United States and Europe to sustain economic growth: "To sustain economic growth, by 2030 the United States will need to add more than 25 million workers, and Western Europe will need to add more than 45 million employees." (World Economic Forum 2011). The methods these organizations use is beyond the scope of this chapter. A simple model is sufficient to determine approximately how many migrants are needed to offset natural population decline. Consider a hypothetical country of 20 million people at base year. The rate of natural population change (crude birth rate – crude death rate) is –5 per thousand and is assumed to remain constant. In the absence of migration, annual population growth is: $P(t+1) = \exp[r]\, P(t)$, where P(t) denotes the population size in year t and r is the rate of population change. In the absence of migration, the population declines to 18 million in 20 years and to 15.5 million in 50 years. To offset population decline, a net immigration of about 100,000 per year is required. In the presence of migration, the population growth is: $P(t+1) = \exp[r]\, P(t) + N(t)$, with N(t) the net migration. The model assumes that net migration is added at the end of the year. If migration is distributed uniformly during the year, the net migration should be multiplied by exp(0.5*r). In case net immigration is 100,000 per year, the population remains at 20 million. The share of the migrant population, i.e. immigrants and their descendents, increases from 0 % initially to 10 % after 20 years and 22 % after 50 years, provided immigrants and natives have the same rate of natural increase. If the rate of natural increase is −5 per thousand for the native population (r_n) and 10 per thousand for the immigrant population (r_m), then a net migration of about 70,000 is sufficient to offset population decline among the native population. Because of the lower immigration, the share of immigrant population increases more slowly during the first years but it speeds up in later years as a result of the difference in natural increase. The share of immigrant population is 7.9 % after 20 years and 22.5 % after 50 years. The size of the native population at time and t is $P_n(t) = \exp[r_n t]\, P_n(0)$, where r_n is growth rate of the native population and t is time. If the annual number of net migration is constant at N, then the size of migrant population, i.e. immigrants and their descendents, is $P_m(t) = \frac{1-\exp[r_m t]}{1-\exp[r_m]} N$, where r_m is the growth rate of the migrant population. The expression is derived from the population growth model, which expresses the population at time t + 1 in terms of the population at time t (see the model above). The constant annual number of net migrations that is required to offset low fertility among the native population, assuming that immigrants have a different fertility, is $N^* = \frac{P_y^* - \exp[r_n t] P[1]}{(1-\exp[r_m t])/(1-\exp[r_m])}$. If the initial population is 20 million and stationary, the population after 20 years should be 20 million too. The required annual number of immigrants to maintain a stationary population is 86.4 thousand. If the target population of 20 million should be reached after 50 years, the annual number of net migration is considerably less, 68.5 thousand. The reason for the difference is that the effect of the positive natural increase among the immigrant population is minor initially but increases with the growing share of the migrant population in the total population.

The migration policy model may be extended to a multiregional system. Consider a region in Europe with considerable population decline: Emilia Romagna (ER) in Italy. The region is highly developed but fertility is low. In the reference period (1990–1991), natural increase was −0.0051 in the capital Bologna and −0.0037 in the rest of Emilia Romagna. The rate of migration from Bologna to a region outside of ER (Italy or rest of world) was 0.0040 and the rate of emigration from the rest of ER was 0.0043. The migration rate from Bologna to the rest of ER was 0.0006 and the migration rate from the rest of ER to Bologna was 0.0025. The

population on 1st January 1991 was 911 thousand in Bologna and 3015 thousand in the rest of ER. The population growth model is $\mathbf{P}(t+1) = \exp[-\mathbf{m}]\ \mathbf{P}(t) + \mathbf{I}(t)$, where $\mathbf{P}$(t) is a vector with the population of Bologna and ER at time t as its elements, $\mathbf{I}$(t) is a vector of number of immigrants in year t, by region. The matrix $\mathbf{m}$ is a 2×2 matrix that contains the rates of natural change, the rates of emigration from Bologna and the rest of ER, and the migration rates between Bologna and the rest of ER. The values in the off-diagonal are the negative of the origin-destination migration rates. The diagonal has the sum of the emigration rates minus the rate of natural increase (for a derivation of the model, see e.g. Rogers 1985). The projection model is $\mathbf{P}(t+1) = \mathbf{G}\mathbf{P}(t) + \mathbf{I}(t) = \begin{bmatrix} 0.9885 & 0.0006 \\ 0.0025 & 0.9914 \end{bmatrix} \mathbf{P}(t) + \mathbf{I}(t)$. The annual number of immigrations from outside ER required to have a population in 2020 that is the same as in 1991, is $\mathbf{I} = \left([\mathbf{I} - \mathbf{G}^t]^{-1}\ [\mathbf{I} - \mathbf{G}] \right)\ \left(\mathbf{P}^*(T) - \mathbf{G}^t\mathbf{P}(0) \right)$, where $\mathbf{P}^*(T) = \mathbf{P}(0)$ (see Willekens 1976, p. 72; 1979). To offset the low fertility, Bologna needs an annual number of immigrations from the rest of Italy and the rest of the world of 9 thousand persons and the rest of Emilia Romagna needs 23 thousand persons. The numbers are based on the assumption of constant demographic rates, including constant emigration rates, and equal rates for natives and immigrants. What applies to Bologna and the rest of Emilia Romagna applies to many other regions in Europe and some other parts of the world. Relatively large numbers of immigrants are required to offset low fertility. As a result of that *replacement migration*, population diversity increases. Since many immigrants are bound to maintain close contacts with their home countries, transnationalism will rise.

Conclusion: Issues for the Future

International mobility is an important feature of today's world. About 1 billion people travel to another country each year (United Nations World Tourism Organization 2014) and around 10 million are estimated to migrate to another country (Abel and Sander 2014). About 214 - million people live in a country other than the country of birth (United Nations estimates). In Northern America and Europe the share of foreign-born exceeds 10 % of the population. International migration is a small proportion of international travel because most people do not settle in the country they visit. They move internationally without changing their usual residence. The people who do change their residence are difficult to track because most countries do not have a comprehensive system in place to register changes in residence. In many countries the census is the source of data. No uniform method exists to collect migration data and figures on migration levels are not comparable.

The measurement of migration and the harmonization of measurement methods are major issues in the study and management of migration. The United Nations recommends measuring permanent migration as a change of residence for at least 12 months. Population censuses frequently record places of residence at census date and 5 years prior to the census. The practice differs greatly between countries. What official migration statistics have in common, however, is the underlying process of change in residence that they intend to measure. That process can be situated in a space-time framework and the differences can be described along the space dimension and the time dimension. Probability models may help to reconcile the differences and produce data that are comparable. In 2007 the European Parliament introduced legislation to establish a common framework for the collection of international migration data in Europe aimed at harmonized statistics. The Parliament acknowledged the

potential of indirect methods that usually involves modeling. The legislation includes the statement: "As part of the statistics process, scientifically based and well documented statistical estimation methods may be used." (European Parliament 2007). The resolution stimulated new research aimed at reliably estimating migration flows from defective data (see e.g. Abel 2010; de Beer et al. 2010; Nowok 2010; Raymer et al. 2011b).

In the meantime, new sources of migration data became available: geographic position systems (GPS) and IP addresses mapped to geographical locations. Zagheni and Weber (2012) study international mobility using e-mail data, in particular the geolocation data that are generated when individuals access internet. The duration of stay of a person is identified by repeated logins. From that information short- and long-term migration flows can be produced.

Throughout the years measures of migration have been developed to summarize patterns and trends. They are calculated directly from migration data or they are based on models describing data. The main use of descriptive models is pattern recognition. Migration flows by origin and destination exhibit spatial patterns that can be remarkably stable, even when overall levels of migration change. The patterns reveal path dependence of migration, origin-specific preferences for destinations, and other ties between regions. They reveal migration systems. Analysis of migration by migrant characteristics may also reveal remarkable patterns. The age pattern has been well-documented. It expresses the link between migration and events in the life course, such as labour-market entry and exit, and marriage. Patterns can also be identified in migration flows by skill level and other characteristics. Such patterns are a consequence of the selectivity of migration. The mechanisms of selection cannot be identified from aggregate data. To uncover the mechanisms that underlie the patterns exhibited by migration flows, actual and potential migrants should be approached and asked about the motives of migration and the barriers and facilitators they experience in turning aspirations and intentions into actions.

Large parts of the world are experiencing or will soon experience demographic phenomena never experienced before: ageing and population decline. Throughout history, some local areas experienced ageing and population decline because of outmigration. Today, low fertility is the driving force. In that context migration gains importance because of (a) the competition for scarce resources (labour, in particular skilled labour), (b) the changing demography in receiving countries and (c) the perceived impact of that change on social cohesion and national and cultural identity. By extending migration models and demographic projection models, these important considerations may be incorporated. Illustrations of simplified policy models are included in this chapter. The models estimate numbers of migrants required to achieve demographic targets. The models capture the demographic dynamics but they do not capture migration motives and the impact of barriers and facilitators on migration. Models that incorporate these factors are necessarily micro-models of behavioural processes and institutional mechanisms. Such models do not yet exist but the new initiatives to model migration flows as outcomes of actions of agents (individuals, households, institutions) and interactions between agents are promising and may lead to a new generation of migration models.

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Part III

Regional Perspectives

African Migration and Population Distribution: Recent Trends, Methodological Challenges and Policy Issues

12

Blessing Uchenna Mberu

Introduction

The importance of various dimensions of human migration in developed and developing countries is underscored by the large number of research focus and policy initiatives in recent years. In sub-Saharan Africa (SSA), there is considerable concern on the implications of migration for development, poverty, health, environmental quality and social welfare provisions in the face of large-scale urban growth, stagnant economies and weak political institutions (Beauchemin and Bocquier 2004; Bilsborrow 1998; Black et al. 2003; Oucho 1998; Todaro 1997; UN-Habitat 2003a, b, 2010; Weinstein 2001). Despite being the least urbanized region in the world, SSA is urbanizing at 4 % per annum and the share of the urban population is projected to increase from the current 37 % to over 60 % by 2050 (UN-Habitat 2010). While cities concentrate risks and hazards for health, exacerbated by inability of countries to provide basic social and economic infrastructure, they also offer greater livelihood choices for housing, employment and services. The current concentration of poverty, slum growth and social disruption in cities, does paint a threatening picture: yet no country in the industrial age has ever achieved significant economic growth without urbanization – the increase in the urban share of total population (UNFPA 2007).

Africa's migration system has been identified as dynamic and extremely complex and as other social processes, is related to the complex multifaceted interactions and interconnections of structure, agency and consciousness (Adepoju 2008; Baker and Aina 1995). The overarching perspective in the region is the view of migration as an intrinsic dimension of economic and social development, reflecting the rational decisions of millions of migrants to seek new opportunities away from local restrictive environments (Chen et al. 1998; Kessides 2006; Montgomery et al. 2003; White et al. 2008). In this chapter, we triangulate theoretical and empirical literature to present an overview of some of the topical dimensions of migration in SSA, the methodological challenges in the study of migration in the region and articulate policy options for maximizing the benefits of migration for regional development.

In the first section we present the dimensions and dynamic trends in Africa's migration system relating to high levels of internal migration and urbanization of poverty, feminization of migration, refugee flows and human trafficking, the challenge of brain drain, brain gain and remittances. The section also addresses the role of regional economic blocs in inter-African free flows of labor and the debate on Africa as a

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_12

migrant destination for economic emergent nations like China. The second section explores the methodological challenges in the study of migration in the region in relation to the overall dearth of migration data and the challenge of undocumented migrants (including refugees) within the region and globally. In the third section, the policy issues and options identified for migration management and the leveraging of migration for Africa's social and economic development are presented. The section synthesizes issues around cheaper and more remittances, diaspora incorporation in home country development, political reforms around constitutional governance, and the importance of regional integration in addressing the hindrances to inter-African migration. The chapter's conclusion underscores the role of investments in data systems and research for a nuanced analyses and understanding of the complex migration flows in the region.

Dimensions and Trends in Africa's Migration System

Among the key dimensions and trends in Africa's migration systems identified by a corpus of researchers include the high levels of internal migration (Beauchemin and Bocquier 2004); migration circulation (Gugler 1991, 2002); urbanization of poverty (APHRC 2002); and the increasing presence of international migration, particularly the role of forced migration and movement of refugees in search of asylum (Zlotnik 2004). Other key dimensions include the feminization of internal and international migration, trafficking in human beings, the challenge of brain drain, brain gain and diaspora engagement, particularly the pursuit of remittances, and the increasing role of regional economic organizations in fostering free flows of labor (Adepoju 2008). Africa as a migrant destination for economic and political emergent nations like China and other Asian countries is attracting recent scrutiny. These complex and dynamic dimensions and trends are discussed under the following sub-headings.

Internal Migration and Urbanization of Poverty

Africa's migration system is hugely dominated by internal migration within countries. Interests in internal migration have continuously focused on its roles in spatial redistribution of population, high rates of urbanization and associated development challenges. Research in Sub-Saharan Africa (SSA) have identified all four conventional internal migration processes (rural-urban, rural-rural, urban-rural and urban-urban) in place in the region since the colonial period and have intensified since independence, including various forms of migration circulation. In terms of the relative importance of the four conventional migration processes evidence is scanty, following the dearth of national level studies across many countries. However, available evidence generally projected the quantitative dominance of rural-rural migration over the much focused rural-urban migration for the whole of sub-Saharan Africa (Oucho 1998). This is linked to most people living in rural area, the modernizing of rural economies and the economic opportunities rural areas presents for employment in its modern developed nodes (Oucho 1998). Evidence from individual countries, such as Nigeria, where nationally representative studies have been conducted, support the dominance of rural-rural migration over rural-urban migration, with 35 % of rural-rural migrants relative to 20 % of rural-urban migrants (NISER 1997). What is peculiar in Nigeria's case is the overall dominance of urban-urban migration stream at 35.5 % of all migrants, which is linked to the country's political evolution from a three-region federation at independence in 1960 to a 36-states federation, with a new federal capital territory by 1991 and 776 local government areas since 1996. These political developments enlarged the political space and opened opportunities for economic activities and political participation, engendering migration from small towns to new state capitals and to the new federal capital, as well as to new local government headquarters (Mberu and Pongou 2010).

Despite evidence that rural–urban migrants are not the largest stream of internal migrants in the region, rural–urban movement, whether for circulation, temporary sojourns in towns, or permanent urban residence, is identified as the most significant form of movement for long-term spatial redistribution, and has attracted much study and policy attentions (Oucho 1998; Oucho and Gould 1993). Excessive migration from rural to urban areas have been implicated in the rapid and unmanageable growth of large urban agglomerates in the region (Chen et al. 1998; Zlotnik 1994). Further, researchers have linked persistent migration to urban areas in the context of declining economic performance of most African countries to a new face of poverty, with a significant proportion of the population living below the poverty line in over-crowded slums and sprawling shanty towns around major cities (UN-Habitat 2003a, 2008, 2010). Evidence from Kenya for instance, indicates that despite the fall in employment opportunities associated with the economic downturn from the 1980s, Nairobi, the capital city's population continued to grow at about 5 % per year between 1969 and 1999 (Government of Kenya 2000). According to the 1999 census, Nairobi had a population of 2.1 million but the 2009 census showed that the population had grown to 3.1 million, an increase of 47.6 % in a decade. Estimates show that between 1990 and 2007, the proportion of urban population living in slum areas in Kenya remained at approximately 55 %, but the situation is more extreme in Nairobi, with about 70 % of residents living in slums or slum-like conditions (UN-Habitat 2003a, 2008, 2010). Studies in the slums of Nairobi have highlighted the significant disadvantages faced by the urban poor with respect to morbidity, access to health services, mortality, and risky sexual practices relative to other population sub-groups, including rural residents (APHRC 2002; Fotso et al. 2008; Kyobutungi et al. 2008; Kabiru et al. 2010; Zulu et al. 2002).

The Nairobi case is only typical of the increasingly urbanization of poverty that are observed in most metropolitan centers in the region (Brockerhoff and Brennan 1998; World Bank2000). Consequently, there has been an increasing concern of the sustainability of urban living in the region especially for the most vulnerable urban poor. A significant call for intervention to address observed development inequities in urban areas was underscored by the United Nations Millennium Development Goal (MDG) 7, Target 11 which aims to achieve a significant improvement in the lives of at least 100 million slum dwellers by 2020. The Target calls for coordinated policies and actions related to slum-upgrading, environmental management, infrastructure development, service delivery and poverty-reduction at large (UN-Habitat 2003b).

Migration Circulation

An important feature of African migration system is the circulation of migrants between destinations and origins. African migration is characterized not in terms of a deep or strict rural/urban divide; but by lifelong links between urban migrants and their rural origins, which is also associated with a strong commitment to hometown development (Smith 1999). This model of migration challenges the dichotomous model of urban versus rural areas as separate spheres and complicates the implications of rural-urban migration for population composition and economic development (Andersson 2001; Ferguson 1999; Goheen and Fisiy 1998; Gugler 1991, 2002; Nyamnjoh and Rowland 1998; Potts 2010; Trager 1998). There is considerable consensus among researchers that out-migration in the region is a household survival strategy and urban-rural linkages is critical for migrant's continued engagement with origin families and communities, reintegration in case of return, and safety net for supplementing precarious urban incomes and livelihoods (De Laat 2008; Mberu et al. 2012; Tostensen 2004). Consequently, migrants bring their returns from migration back to their rural origin communities and exert influence on their home communities long after migration, through remittances and investments in physical and social capital (Konsiega 2006; Sana and Massey 2005).

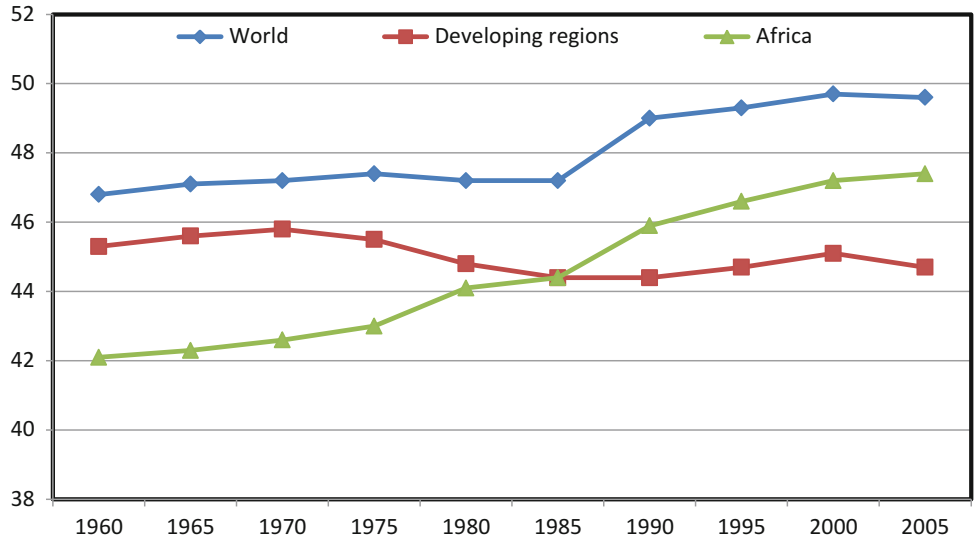
As an economic survival strategy, urban-rural linkages have assumed new importance with rising urban poverty across most of Africa. In the city, most migrants, even when they manage to support a family, enjoy little economic security and at times face uncertain political conditions. Moreover, despite widespread unemployment and underemployment there is generally no unemployment compensations. Consequently, reciprocal urban-rural linkages have been reinforced in recent times due to declining livelihood opportunities and rising cost of living in the urban areas. Recent studies in Kenya have found that urban households are increasingly relying on food transfers and income from rural businesses to supplement their resources (Owuor 2007; Foeken and Owuor 2008). Beyond Kenya, Potts (2010) showed how the political and economic changes in Zimbabwe since the 1980s transformed Harare from one of the best African cities to live in over this period to one of the worst, turning ordinary residents of Harare from probably the most economically and socially secure urban people in sub-Saharan Africa in the 1980s, to become among the least secure by the mid-2000s. Over the same period most of the middle class urban dwellers in sub-Saharan Africa generally had suffered significant falls in their living standards, leading to adaptations in their livelihoods and the nature of migration, particularly the re-invention of circulation and rural-urban links as a resource pool that can be taken advantage of during bad times, a pool more reliable than what the city offers to most of its citizenry (Lesetedi 2003; Potts 1997, 2010). Further, maintaining linkages with places of origin have been identified as critical for reintegration into origin communities should a migrant choose to move back after retirement at old age or following other complex web of challenges in urban places of residence (Chepngeno and Ezeh 2007; Chukwuezi 2001; Ferguson 1999; Smith 2005).

The overarching perspective on migration circulation in Africa is that strengthening and adaptation of urban-rural linkages represents the maintenance of an important safety valve and welfare option for both rural households and urban people who are vulnerable to economic fluctuations (Lesetedi 2003; Owour 2007; Foeken and Owuor 2008). However, the challenging living conditions of urban slum dwellers may erode the ability of poor households to maintain rural ties (Bryceson and Mbara 2003; Rakodi 2006). This in turn threatens this safety valve for the urban poor, particularly among the growing number of older migrants who *aged* in-situ and are mostly vulnerable to social and economic hardships due to their lack of support networks in urban areas (Mberu et al. 2012).

Feminization of Migration

According to the International Organization for Migration-IOM (2000), the traditional pattern of male-dominated, long-term, and long-distance migration within and from Africa is increasingly becoming feminized. For many decades during the colonial period and slightly thereafter, the male-dominant migration in sub-Saharan Africa was sustained by biased employment opportunities, the type of work available and an inequitable provision of education. In recent decades however, following increased access to higher education and skills training, higher female labor participation rates and more employment opportunities for women, female migration has become a significant phenomenon involving both autonomous and associational migrants (Adepoju 2008; IOM 2000; Zlotnik 2003). By 2000, it is estimated that 46.7 % of the 16 million international migrants in Africa were female, up from 42 % in 1960 when the number of international migrants in the continent stood at nine million. United Nations estimates show that the proportion of females in the total international migration stock continuously increased in all sub-regions of SSA throughout the decades 1960–2005, while the proportion for developing regions declined slightly over the same period, as summarized in Graph 12.1 that follows.

Autonomous migration has been linked to providing women with new economic opportunities and sometimes escape from a failed



Graph 12.1 Female migrants as percentage of all international migrants, 1960–2005 (Data Source: UN 2007 (Quoted in Adepoju 2008))

marriage, particularly in societies in which divorce is not an option. Increasing female migration may also be a reflection of pressure on families – women are migrating as a means of reducing absolute dependence on agriculture as well as taking advantage of the expansion of employment opportunities in the urban formal and informal sectors (Mbugua 1997; Oppong 1997). Globalization has also introduced new labor market dynamics, including a demand for highly skilled workers in healthcare and other service sectors. In the UK, the migration of skilled females has become established through the UK Nursing and Midwifery Council, with professional women – nurses and doctors – recruited from Nigeria, Ghana, Kenya, Malawi, Zimbabwe, South Africa and Uganda to work in Britain's National Health Service and in private home care centers (Buchan and Dovlo 2004; Adepoju 2008).

Empowering economically, these migration processes have resulted in modified gender roles and family scenarios, including the emergence of transnational families. The implications of spousal separations for stability of unions, divorce, child bearing and rearing and negotiations about male and female roles are among the emerging areas of concern and new challenges for research, public awareness, advocacy and public policy (UNFPA 2006).

Forced Migration: IDPs, Refugees, Asylum Seekers

Apart from civil wars, many countries in SSA are plagued with recurring droughts, famine, political conflicts and transitions, as well as unfavorable government policies and poor governance that often trigger movements, particularly of the most vulnerable poor. According to the Internal Displacement Monitoring Centre (IDMC), globally, 2009 was the worst year for displacement, through conflict and violence, since the mid-1990s. A global total of 27.1 million people were internally displaced at the end of the year, including 6.8 million newly displaced. Africa is identified as the most affected region with 11.6 million IDPs in 21 countries (IDMC 2010). Out of the six countries with over a million people identified as IDPs, three are in Africa- Sudan, the Democratic Republic of the Congo (DRC) and Somalia. In 2011, IDMC reported an estimated 9.7 million IDPs in 21 SSA countries, representing over a third of the world's total IDPS. Sudan, DRC and Somalia continued to be

the countries with the largest internally displaced populations in Africa (IDMC and NRC 2011). Table 12.1 summarizes all Africa data.

In terms of triggers of forced migration, there are many, but most can be encapsulated under armed conflict, deliberate policy or arbitrary displacement, generalized violence, and human rights violations. Examples of these abound across the region, including the wars in the Horn of Africa (involving Ethiopia, Eritrea, Somalia and South Sudan), wars and ethnic conflicts in Angola, Liberia, Sierra Leone and the Great Lakes region. In the case of the Great Lakes region, genocide in Rwanda, armed conflict in Burundi and the overthrow of the Government of Zaire (followed by guerrilla warfare in the DRC) produced large volumes of internally displaced peoples and refugees, which heavily taxed the capacity of host countries such as Tanzania, Uganda and Sudan. In Kenya, the 2007/2008 post election violence resulted into the death of an estimated 1,300 persons and the displacement of hundreds of thousands of Kenyans, many of whom are yet to be settled after 5 years. The intractable civil war between the Government of Somalia and the Islamic militant group Al-Shabab, has generated hundreds of thousands of Somali refugees in neighboring countries especially in Kenya. In Nigeria, conflicts among an estimated 250–400 ethnic groups have always been part of its history. Since the country's independence, the severity of ethnic conflict has waxed and waned according to political developments. Under several successive military governments, brutal tactics generally kept ethnic and religious rivalries in check. However, since the election of a democratic government in 1999, ethnic and religious conflicts have surged in both number and intensity leading to a sizeable number of internally displaced persons (IDPs) (Nigerian Red Cross Society 2007). While the figures fluctuate considerably due to complex displacement patterns and the lack of any comprehensive and reliable survey data, the number of IDPs in Nigeria was estimated to be approximately 3.2 million between 2003 and 2008 (National Commission for Refugees2008). Most recently, the reasons for internal displacement vary by geo-political zones. In the Niger Delta about 480,000 persons were displaced between 2006 and 2008 in the on-going clashes surrounding the benefits of oil exploration and exploitation. The implementation of the International Court of Justice ruling that gave control of the Bakassi peninsula to Cameroon created an unexpected wave of displacement of over 755,000 Nigerian inhabitants into the neighboring Cross River and Akwa Ibom states between 2007 and 2008. Between 2005 and 2008, in the Northern States of Kano, Kaduna, Kwara, Taraba, Adamawa, Benue, Plateau, and Kogi, the displacement of a total of 1.25 million persons was linked to ethno-religious and political conflicts, including the most recent and on-going bombings of public places by the Boko Haram Islamic Militants. Yet in other northern states – Yobe, Jigawa, Kebbi, and Gombe- about 450,000 persons were displaced by flooding between 2004 and 2007. On a larger scale and following government urban maintenance and/or renewal programs, over two million people were forcibly evicted from their homes in cities such as Lagos, Abuja, and Port Harcourt between 2000 and 2007 (The Centre on Housing Rights and Evictions 2008).

In terms of refugees, the United Nations High Commissioner for Refugees (UNHCR) (2007) reported that Nigeria hosted approximately 9,000 refugees at the end of 2005. The majority of these refugees were from Liberia (6,051), Sierra Leone (1,670), and the DRC (703). In addition, the country hosted several thousands of asylum seekers, from these countries as well. The UNHCR reported the repatriation from Nigeria of 13,000 refugees to Liberia and Sierra Leone following the end of civil wars in those countries, with many more yet to be repatriated (UNHCR 2007).

In Cameroon, a key aspect of immigration into the country is related to the influx of displaced people from neighboring countries following civil and political conflicts – notably in Chad, Rwanda, Sudan, Sierra Leone, Nigeria, Congo, and Central African Republic. In total, UNHCR counted 52,042 refugees and 6,766

Table 12.1 Key internally displaced persons (IDPs) by African countries by size, causes and peak and years

Country	IDP population	% of total population	Start of current displacement	Peak of IDPs (year)	New displacement	Causes of displacement	HDI
Burundi	78,000	0.9 %	1993	800,000 (1999)	0	Armed conflict, generalized violence	185
CAR	105,000	2.3 %	2005	212,000 (2007)	22,180	Armed conflict, generalized violence human rights violations	179
Chad	126,000	1.1 %	2005	185,000 (2007)	0	Armed conflict, generalized violence, human rights violations	183
Côte d'Ivoire	247,000	1.2 %	2002	1,100,000 (2003)	1,000,000	Armed conflict, generalized violence, human rights violations	170
DR Congo	1,710,000	2.5 %	1996	3,400,000 (2003)	At least 168,000	Armed conflict, generalized violence, human rights violations	187
Ethiopia	Undetermined	No comprehensive surveys of IDPs have been carried out, the exception being in March 2009, when inter-ethnic conflict between the Garre of the Somali region and the Boran of the Oromiya region displaced an estimated 160,000 people. Assessments at that time were jointly conducted by UN agencies and NGOs with the participation of the government				Armed conflict, generalized violence	174
Kenya	About 250,000	About 0.6 %	Undetermined	650,000 (2008)	50,000	Generalized and post-election violence, human rights violations	143
Liberia	Undetermined	Undetermined	1989	500,000 (2003)	Undetermined	Armed conflict, generalized violence, human rights violations	182
Niger	Undetermined	Undetermined	2007	11,000 (2007)	Undetermined	Armed conflict, generalized violence, human rights violations	186
Nigeria	Undetermined	Undetermined	1999	Undetermined	At least 65,000	Armed conflict, generalized violence, human rights violations	142
Senegal	10–40,000	0.1–0.3 %	1982	70,000 (2007)	Undetermined	Armed conflict	155
Somalia	1,460,000	16 %	1988	1,500,000 (2007)	100,000	Armed conflict, deliberate policy or arbitrary displacement, generalized violence, human rights violations	–
South Sudan	Undetermined	Undetermined	1983	4,000,000 (2004)	350,000	Armed conflict, generalized violence, human rights violations	–
Sudan	At least 2,200,000	7.0 %	2003	2,700,000 (2008)	At least 115,000	Armed conflict, deliberate policy or practice of arbitrary displacement, human rights violations	169
Uganda	About 30,000	0.1 %	1988	1,840,000 (2005)	0	Armed conflict, generalized violence, human rights violations	161
Zimbabwe	Undetermined	Undetermined	2000	Undetermined	Undetermined	Human rights violations	173

Source: IDMC and NRC (2011)

asylum seekers in Cameroon in 2005; the large majority (94 %) from either Chad or Nigeria. Following persistent conflicts in the region, the number of refugees and asylum seekers increased to 58,800 in 2006, 71,200 in 2007, and 83,268 in 2009 (Evina 2009; Ndione et Pabanel 2007; USCRI 2008, 2009). As new conflicts emerge and old ones evolve, recent reports indicate that nearly 2.2 million Africans are living in countries other than the ones in which they were born as refugees (UNHCR 2010; Lucas 2006).

Apart from IDPs and refugees, many displaced persons have sought asylum within Africa and beyond. Most asylum seekers from the region come from Central African Republic, Chad, Democratic Republic of the Congo, and Nigeria. About one-third of all refugees and asylees admitted to the United States in 2007 were from Africa. In the case of Nigeria, large numbers of refugees and asylum seekers have left Nigeria to settle elsewhere in Africa and across the global North (Stock 2005). In 2006, Nigerians registered asylum applications in 17 countries around the world and the upsurge in applications is linked to renewed ethnic and religious unrests and conflicts, which have killed, injured, displaced and dislocated hundreds of thousands and destroyed their livelihoods particularly in the Niger Delta and Northern States (Daily Independent 2009; Mberu and Pongou 2010; UNHCR 2008).

Emigration, Brain Drain and Brain Gain

Traditional debates on emigration around brain drain and recently on brain gain and remittances are dominant themes in discourses on international migration in SSA. Emigration, whether induced by individual decision, natural disasters or political conflicts, has often been viewed as a failure of micro and macro economic and political policies rather than an opportunity (Ratha et al. 2011a). However, discourses on emigration and brain drain in recent years have shifted to how to harness the gains of emigration for development in countries of origin (Easterly and Nyarko 2008; de Haas 2010). The areas of increased focus include knowledge of magnitude, direction and uses of diaspora remittances; the distinctiveness of diaspora investment and the non-financial influences of diasporas (Newland and Patrick 2004). In 2004, The World Bank reported that remittances to developing countries reached $126 billion, making it developing countries' second most important source of foreign exchange after foreign direct investment of $165 billion, and far ahead of $79 billion total official development assistance. Mutume (2005) pointed out that some of the remitted funds find its way deep into the rural areas of Africa, and may send a child to school, build a house or buy food to sustain those remaining at home.

In terms of volume of emigration, Sub-Saharan Africa's emigrant stock in 2010 was estimated at 21.8 million people representing 2.5 % of the region's population (World Bank2011). The majority of international migrants from Africa are largely intra-regional, accounting for about 63 % of the region's international migration. The corresponding destinations of the rest of emigrants are: high income OECD countries-24.8 %; high income non-OECD countries-2.5 %; Other developing countries-1.8 %; and Unidentified destinations-7.8 % (World Bank 2011). In terms of specific countries, the top ten emigration SSA countries and their emigration stocks as a percentage of their population is summarized in Table 12.2.

Skilled migration rates are particularly high in Africa. In 2000 one out of every eight Africans with a university education lived in a country in the OECD, the highest rate among developing regions except the Caribbean, Central America, and Mexico. The UNESCO reported that over 300,000 highly qualified Africans are currently in the Diaspora, 30,000 of which have PhDs (Oyelere 2007). The World Bank (2011) report shows that the proportion of the emigrant population of the tertiary educated in the top ten SSA countries in 2000 (summarized in Fig. 12.1) ranges from 35.6 % in Uganda to 67.7 % in Cape Verde. Bhargava, et al. (2011) estimated that 21, 516 physicians, representing 18.4 %

Table 12.2 Top 10 SSA emigration countries, and emigrant stock as percentage of the origin population

Region/country	Population 2009 (millions)	Emigrant stock 2010 (thousands)	Emigrants/population (percent)
Sub-Saharan Africa	862.0	21,900.0	2.5
Burkina Faso	15.8	1,576.0	9.7
Zimbabwe	12.5	1,253.1	9.9
Mozambique	22.9	1,178.5	5.0
Cote D'Ivoire	21.1	1,170.1	5.4
Mali	13.0	1,012.7	7.6
Nigeria	154.7	1,000.0	0.6
Sudan	42.3	967.5	2.2
Eritrea	5.1	941.2	18.0
Congo Democratic Republic	66.0	913.9	1.3
South Africa	49.3	878.1	1.7

Data Source: The World Bank2011

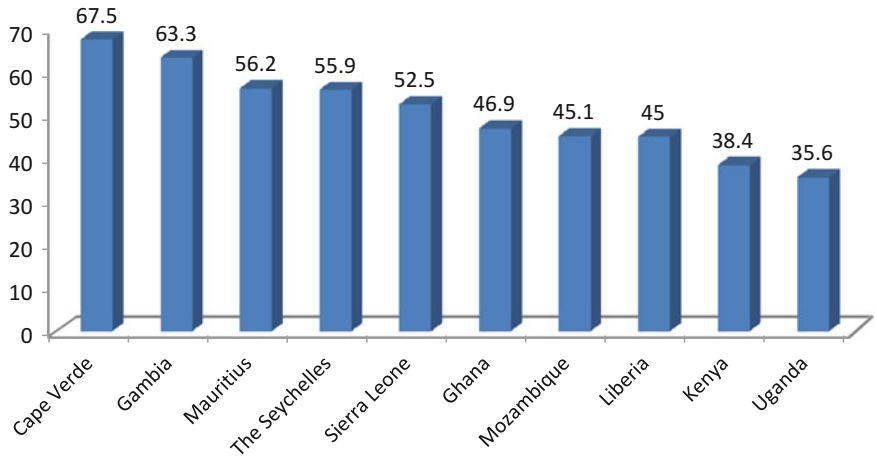


Fig. 12.1 The Emigration of the tertiary educated in top ten SSA Countries, 2000 (Data Source: World Bank 2011)

trained in the region had emigrated to other regions of the world. Earlier estimates, however, suggested even a higher figure of 36,653 emigrant physicians, representing 28 % (Clemens and Pettersson 2006). Similarly, an estimated 53,298 or 11 % of nurses trained in the region are working in foreign countries outside the region. These numbers are substantial and support the perspective that the scattering of Africans from the continent has had significant negative effects on human capital growth and Africa's economic development. Statistics covering the last three decades in many countries in SSA led to the same conclusion of not only brain drain but also significant amount of brain waste (Docquier and Bhargava 2006; IIE 2002). For instance, estimates from OECD countries confirm that in 2005, 55.1 %, 51.2 % and 47 % of emigrants in OECD countries from Nigeria, Egypt and South Africa respectively, were highly skilled. Other countries with similar skilled emigrants in OECD countries include: Benin, 43.5 %, Chad, 41 % and Sudan, 40.5 %. A recent estimate cognizance of huge Nigerian emigrant population in so many countries, put the population of Nigerians living outside the country at about 20 million people (Aderinokun 2009). According to data from the U.S. Census Bureau, while African immigrants have been reported to be the most educated immigrant group in the

United States, Nigerians stood out in the mix with about 17 % of all Nigerians in the United States in 2006, holding a master's degrees, 4 % held a doctorate, and 37 % had bachelor's degrees, making Nigerians the most educated ethnic group in the country, surpassing Whites and Asians (Casmir 2008).

In recent years, there is a new perspective on international migration that provides evidence that brain drain is not only doom and gloom but may induce positive effects in sending countries through various channels, which includes remittances, return migration, diaspora externalities and network effects that may compensate the sending countries for their loss of human capital (Boeri et al. 2012). The increasing recognition of the potential of emigration in stimulating development in countries of origin is accompanied by engagement of migrants and diaspora organizations in development cooperation. Following the surge in remittances – which now amount to well over two times the value of official development assistance and tenfold of the net private capital transfers to developing countries – international organizations and governments are increasingly integrating emigration into development policies. There is particularly a focus on the macro-economic impact of migration, such as the importance of remittances for national accounts and their potential role in enabling business investments. For example, from a US$1.54 billion in 1998 Nigeria is the sixth remittance recipient developing country at $10.0 billion in 2010, after India ($55.0 bn), China ($51.0 bn), Mexico ($22.6 bn), Philippines ($21.3 bn), and Bangladesh ($11.1 bn). The other countries that make up the global top ten are Pakistan ($9.4 bn), Lebanon ($8.2 bn), Egypt ($7.7 bn), and Vietnam ($7.2 bn) (Ratha et al. 2011b). A 2005 World Bank study found that Nigerian remittance recipients, located predominantly in the southern part of the country commonly use remittances for family expenses and social security for the elderly, the disabled, and orphans, as well as education of relatives, payback for sponsorship of migration, business development financing and funding of special occasions like funerals, weddings, and holidays (e.g., Christmas and Hajj). Nigerian expatriates were found to also make substantial housing investments in the homeland (Osili 2004).

Trafficking and Smuggling of Migrants

Human trafficking has been identified as the emerging dark side of human migration in Africa (Adepoju 2008). Deepening poverty, persistent unemployment, conflicts, human deprivation and expectations of a dismal future have fostered an environment in which human trafficking can flourish (ILO2003). Adepoju (2008) identified three main types of trafficking in the region: trafficking in children, mainly for farm labor and domestic work mostly within and across African countries; trafficking in women and young persons for sexual exploitation, mainly outside the region particularly in the EU, Lebanon and the Gulf States; and trafficking in women from outside the region, notably from Bangkok, Hong Kong, Kuala Lumpur, Singapore, India and parts of South Asia for the sex industry, mainly in South Africa.

Child trafficking in SSA is a demand-driven phenomenon – the existence of an international market for children in labor and the sex trade coupled with an abundant supply of children from poor families. Children are recruited through networks of agents and parents are forced by poverty and ignorance to enlist their children, to work as domestic servants, in the informal sector or on plantations, hoping to benefit from their wages (Human Rights Watch 2003). Also, trafficked women and children are often bonded and indebted to trafficking syndicates (Dottridge 2002). The IOM (2003) reported of rituals, which are performed to frighten and bind the victims to trafficking syndicates, with many victims ending up engulfed by, rather than escaping from the trap of poverty, resulting in both personal and family traumas.

Apart from the underlying social and economic problems and limited livelihood opportunities, which generate trafficked women

and children in home countries, restrictive immigration policies in the global North since the 1990s, which made illegal entry more risky and costly, provided opportunities for traffickers to bud and blossom (Carling 2005). Consequently, migrants are adopting more sophisticated, daring, and evasive methods to elude increasingly tight border controls to enter countries in the developed North. While many are reported to have perished during perilous attempts to cross the sea to Europe in rickety boats, yet those who manage to find their way into Europe are often apprehended and deported on arrival or soon thereafter (Mberu and Pongou 2010). The challenges related to human trafficking in the region remain substantial and ongoing, suggesting the value of concerted interventions from origin, transit and destination countries.

Chinese Immigration to Africa

An important dimension in Africa's migration system is the level and forms of immigration from outside the region, particularly in recent times from Asia. Historically, immigration into the continent have consistently been related to the systematic quest for Africa's human and natural resources. Since the days of the trans-Saharan and Atlantic slave trades, the various forms of exploitation of African human and material resources have attracted significant historical commentaries. In recent years, Africa remains increasingly the object of external interests and a contested territory among new competitors, notably China (Melber 2007). While the Chinese immigration is very recent, some analysts have called attention to its semblance of historical immigration from outside the region, notably by Europeans, in both form and effects (Lee et al. 2007).

The rapid rise of China as a global economic player and their expansionist strategy into the African continent for markets and access to the region's fossil energy resources and other minerals and metals has contributed to concerns about a new scramble for Africa among external conflicting economic and political interests. Despite China's positive image in parts of Africa, following increasing investments in credit and infrastructure, Chinese policy of non-interference and collaboration with known oppressive African regimes is raising concern across the region (Songwe and Moyo 2012; Schiere and Rugamba 2011). A dimension of Chinese immigration into Africa is linked to the trafficking in human persons. While South Africa is identified as a destination for regional and extra-regional trafficking of women and children, China has been identified among the external linkages to these activities. It is estimated that over 1,000 young women from Bangkok, Hong Kong, Kuala Lumpur and Singapore are trafficked into South Africa annually through a network of organized syndicates from Thailand, China and Eastern Europe (Adepoju 2008; Martens et al. 2003; Selabe 2000).

Despite the on-going debates on the role of Chinese immigration in the new scramble for Africa's resources, Songwe and Moyo (2012) saw the need for African countries to continue to cultivate and build a new and promising economic relationship with China, as an important and dynamic export destination for African exports, a key investor in infrastructural development and job creation to address youth unemployment. However, these need to be balanced against the challenge of increasing Chinese immigrant workers with the potential for exacerbating the regions massive youth unemployment put at 17 % across all countries in 2009.

International Organizations and Africa's Migration and Population Distribution

An important trend in Africa's migration and population distribution in the last decade is the increasing roles of international organizations in addressing various migration challenges in the region. Such involvement was typified by the African Union's strategic framework for a policy on migration at the Lusaka summit of 2001. The summit addressed emerging migratory configurations, the integration of migration into

national and regional agendas for security, stability, development and cooperation, as well as fostering the free movement of people and strengthening of regional cooperation on migration matters (Adepoju 2006; African Union 2006). Over the last decade, there have been several meetings by governments, inter-governmental and non-governmental multilateral organizations around African migration and its implications for the region and beyond. Among such summits are: the 2006 Euro-African conference on migration and development in Rabat Morocco; the 2006 Joint Africa-EU Declaration on Migration and Development in Sirte, Libya; the 2006 UN High-level Dialogue on Migration and Development in the General Assembly in New York; the 2007 follow-up to the Rabat Declaration in Madrid Spain; the 2007 EU-Africa strategic partnership summit in Lisbon; and the 2007 Global Forum on Migration and Development in Brussels. The declarations and adopted action plans from these meetings reflect the increasing recognition of migration as an engine for regional cooperation and integration and the socioeconomic development of the continent through the collaboration of nations (Adepoju 2008; Commission of the European Communities 2007; Martin et al. 2007).

While there is no lack of evidence of the global consensus on the continuation of dialogue among states to jointly address migration matters, and of positive declarations of commitments by governments, the extent to which stated priorities has been turned into concrete action in developed and developing countries has been limited, with the exception perhaps of remittance policies (de Haas 2006). Across the continent, efforts at sub-regional economic integration through sub-regional blocs such as Economic Community of West African States (ECOWAS) and East Africa Community (EAC), among others, to allow free movements of peoples and goods remain encumbered by substantial obstacles with most initiatives still in their infancy or stagnant, and their impact yet to be empirically evaluated.

The Methodological Challenges of Studying Migration in Africa

The Complexity of Africa's Migration Context

One key challenge in studying Africa's migration system is the complex socio-economic, political and environmental contexts in which most migration in sub-Saharan Africa take place. Apart from civil wars, many countries in the region are plagued by recurring droughts, famine, political conflicts and transitions, as well as unfavorable government policies and poor governance that often trigger population movements, particularly of the most vulnerable poor. The disruptions associated with these forces complicate the model of migration both as a major component of population change and as a determinant or consequence of economic development (Adepoju 1977; Carballo 2005; Mberu 2006). Yet these contexts, which are typical of several African countries and relevant for a comprehensive understanding of Africa's migration systems, remain scarcely examined due to the difficulty of such studies.

Further, Africa is a continent of 54 independent states, with complex political, economic and cultural systems, which create significant possibilities of international population exchanges but difficult to define, track and study. According to Ratha et al. (2011a), limited financial and technical resources, borders that are long and difficult to police, and ethnic ties across borders have combined to establish a relatively control-free environment for cross-border migration within Africa. The continent's colonial powers imposed arbitrary and largely artificial international borders that often divided people belonging to the same tribal or ethnic group. Consequently, significant political challenges to governments and higher costs for migrants persist, as they face different legal and regulatory systems, higher fees for remittances, and risks associated with undocumented migration (Ratha et al. 2011a).

Undocumented Migrants and Inadequate Official Records

Related to artificial borders between African countries is the challenge of undocumented migrants. According to Ratha et al. (2011a) about 30 million Africans – about 3 % of the population – have migrated internationally (including within Africa), both as voluntary migrants and international refugees. This figure is seen as an underestimation of the size and importance of migration from the region and particularly within Africa. Undocumented cross border migration remains a perennial challenge, especially where migrants come from contiguous areas of neighboring countries and have ethnic ties to people in their new country. As indicated above, in the process of colonial state formation, borders often overlooked linguistic and ethnic commonalities, which has created a daunting challenge in the study of immigration in the region. Beyond the region, illegal routes have increasingly brought in more immigrants than can be accounted by official statistics. Consequently, the full volume of Africa's emigrant stock remains largely uncertain. Nigeria typifies the uncertainty of Africa's emigration stock with official estimates up from 972, 100 people in 2005 to 1.3 million by 2010 (UNDP 2009). However, these figures were challenged by other estimates, which put the population of Nigerians living outside the country at about 20 million people (Aderinokun 2009).

The Overall Paucity of African Migration Data

Data on migration in Africa are often missing, out of date, or inconsistent with definitions used in other countries. Intra-regional migration flows are often informal and not captured in official statistics. Data on seasonal and transit migration remain a big challenge. Although, the recording of refugee flows by the United Nations High Commissioner for Refugees (UNHCR) is judged more accurate and timely, the enormity and ubiquity of conflicts engender more refugees that potentially overwhelm data systems.

Despite increasingly regular censuses across Africa, the use of census data for extensive scholarly pursuits, policy formulation and development planning remain limited. In many countries in the region, sometimes census data are more of political than demographic instruments, often controversial and inaccessible. Further, census data is generally plagued by technical issues, such as long intercensal intervals, delays in processing and releasing census information, and difficulties in data use, which are exacerbated by clashing political interests and possible data manipulation. Many censuses do not include specific questions on change of residence, leading researchers to characterize migration data as patchy, inadequate and internationally non-comparable (Oucho 1998; Tacoli 2001). The reliance on infrequent census data particularly impairs knowledge of migration flows in countries affected by significant economic, social or political shocks. Overall, migration data in Africa, especially on intra-African migration, require substantial improvement in availability, timeliness, quality, and cross-country comparability (Ratha et al. 2011a).

An important dimension of data limitation is the lack of appropriate data for the study of migration. Migration is a process and following the history of step-wise migration and multistep moves in the region, migrant behavior should also be considered as a process following the life course perspective (Afolayan 1985). Goldstein (1984) showed that not all migration is permanent and that return, repeat, and temporary movements are not reflected in the redistribution estimates, nor are counter-stream migrants included. However, despite this recognition, most African studies compare migrants and non-migrants at a single point in time, while hardly any explore migrant behavior *over* time. Yet, this limitation is hard to overcome, as studies that track migration as a process need to follow individuals over their life course, which requires study designs that have a longitudinal data gathering framework, yet to be available in many developing societies. Consequently, researchers utilize and adapt available cross-sectional data sets in the study of migration and behavior despite known limitations,

particularly in terms of estimation of the migration effect over the life course. The challenge of lack of data extends to human trafficking in the region. According to Adepoju (2008) data on trafficking remain extremely poor, so details on trafficking within or outside the region are incomplete.

Gaps in data-gathering, cooperative research and information-sharing between countries of origin, transit and destination, on the number and nationalities of trafficked persons and on smuggling routes were also identified, including the need for tracer studies of trafficked victims. Addressing these data gaps is important, against the backdrop of complicated Africa's human trafficking and smuggling map, involving diverse origins within and outside the region (Adepoju 2004). The weak enforcement of existing laws, and the absence of judicial frameworks that enable attempts to arrest, prosecute and punish human traffickers were also identified (Pearson 2002). More importantly is the gap in legal framework and institutional capacity across countries for the protection and rehabilitation of victims. In South Africa, for instance, trafficked women, mostly prostitutes apprehended by security forces, are simply deported to their home countries as irregular immigrants – because of a lack of domestic legal instruments for criminalizing trafficking – as is indeed the case in other parts of SSA as well (Adepoju 2008).

Policy Issues Relating to Migration and Population Distribution in Africa

Enhancing Returns from Emigration

The increasing global recognition of the importance of skills and remittances among the diaspora in the development agenda of origin countries has been linked to promises of a new regime of more balanced and integrated approach that places emphasis on development rather than on control of migrants by origin and host governments (Skeldon 2009). In Africa, recent regional initiatives by the New Partnership for Africa's Development (NEPAD) and the African Union (AU) aimed at enhancing African governments – diaspora relations have positively reinforced this paradigm shift. Both NEPAD and AU have formally recognized the African diaspora as a key player in the development agenda of the continent, particularly in the current dialogue and efforts to address the issues of brain drain and capacity-building in Africa (Tebeje 2005). In this regard, the AU amended its Charter in 2003 to ". . . encourage the full participation of the African Diaspora as an important part of the continent." Despite optimisms generated by these initiatives, effective and sustained diaspora engagement have been identified as very challenging and will require policy and resource commitments by key stakeholders, including international organizations, African governments, and host countries (Tebeje 2005). While these efforts are very recent and mostly at embryonic stages, the emerging diaspora movements, the expressed growing political will of African governments and the possibilities created by information technology, ceteris paribus, promises that the African diaspora may, after all, not be a loss to the continent. For instance, the Republic of Cameroon has embraced the emerging diaspora engagement regime in practical terms. The government developed a policy framework to address the country's migration management challenges through the new national migration policy otherwise referred to as the 1997 Act No. 97/012, which prioritized support for co-development. Despite systemic policy implementation failures of government institutions and lack of financial resources, the policy focus on creating incentives, are consistent with the new resolve to both reach out and harness the country's diaspora and its human and financial investment capacity for the country's development (Mberu and Pongou 2012).

Implementing Political and Citizenship Reforms

Political and citizenship reforms in many African countries would help ameliorate conditions that engender internal displacement, generate refugees and mass emigration, and produce

brain drain. Such reforms are necessary to also create motivation for economic investment and diaspora involvement in home country development. In this regard, there is need to open the political space in many countries in order to heal the adversarial relationships between African governments and the African diaspora. In Cameroon for instance, the stranglehold on political power by an ethnic oligarchy, together with an unwieldy bureaucracy, have been identified as hindrances to socioeconomic and political reforms that will address high skill emigration from the country as well as spur skilled diaspora return to the country (Fleisher 2007; Mberu and Pongou 2012).

Ethiopia has been characterized by recurrent political instability, war, famine and economic decline following the overthrow of Emperor Halie Selasie in 1973 and the Derg regime in 1991 (Lindstrom and Berhanu 1999). However, the coming to power of the Ethiopian People's Revolutionary Democratic Front (EPRDF), which has promoted a policy of ethnic federalism as a form of democratization of Ethiopian society, has not dampened conflict, but rather increased competition among groups that vie for land and natural resources, as well as administrative boundaries and government budgets. Political reforms in Ethiopia is therefore needed as a curbing strategy for distress migration as well as creating an enabling environment for diaspora investment or return to the country (International Crisis Group 2009).

An important dimension of citizenship reform is for governments to consider the cost and benefits of dual citizenship. There is an expectation that allowing for dual citizenship has the potential to encourage greater participation by diasporas in their origin countries, facilitate travel, avoiding the constraints foreigners face on some transactions (for example, temporary work, land ownership), and providing access to public services and social benefits (Ratha et al. 2011a). A few African countries have established government agencies to encourage diasporas to invest, assist local communities, and provide policy advice. Countries with large numbers of emigrants, including Ghana, Nigeria, Senegal, and South Africa, have developed plans to incorporate diaspora communities as partners in development programs, although attractive, the effectiveness of such efforts need empirical evaluation.

Human Trafficking Policy Measures

Researchers in the region have identified the importance of media coverage in creating knowledge and awareness of the dangers and dimensions of human trafficking, as well as engender action by national governments and regional intergovernmental organizations. Adepoju (2005) showed how widespread media coverage of the harrowing experiences of trafficked victims, intensive advocacy by concerned local and international NGOs and case studies of human rights abuses and dangers to trafficked persons in transit and at their destinations, forced many leaders to accept that human trafficking in the region has reached crisis proportions. This is also linked to the adoption of a political declaration and action plans against human trafficking, commitment to the ratification and full implementation of international instruments to strengthen laws against trafficking, including the training of police, immigration officials, prosecutors and judges and data-gathering (Sita 2003). The importance of collaboration between origin, transit and destination countries have been underscored together with efforts in countries of origin and destination to combat trafficking, raise awareness, protect and assist victims, create a legislative framework and increase law enforcement (Adepoju 2008; Wilton Park 2007). One of the dominant perspectives on human trafficking is that efforts aimed at remedying the low status of women – particularly the economic disadvantages they face – must be woven into a larger antipoverty, anticorruption framework at national and global levels.

Responding to the Challenge of Skilled Migration

African policy makers face the urgent task of resolving the unemployment crisis in order to productively engage the teeming educated but unemployed young people. This underscores the obvious need to create, restructure and enhance the employment opportunity structures across all countries of the region. There are also the policy challenge of enhancing the economic, political, and social environments of most countries in order to retain and lure home the skilled professionals required for national development (Adepoju 2004). An African skilled diaspora study in the Netherlands, identified country level conditions which forced emigration from the homeland in the first place, including civil conflicts, bad governance, political instability and poor economic conditions as still limiting or preventing knowledge transfers back to Africa (Edokat 2000; Evina 2009; Mohamoud 2005). Ratha et al. (2011a) detailed many policy options among which include countries offering incentives, such as higher salaries, help in finding employment, or subsidies for housing and return expenses, to encourage the return of professionals. However the effectiveness of such incentives remains unclear, as motivations for migration often include professional advancement and the quality of the research environment. Programs by destination countries (for example, France) and international organizations (for example, the United Nations Development Program on Transfer of Knowledge Through Expatriate Nationals [TOKTEN]) were also identified as steps to encourage return (Ratha et al. 2011a).

Refugee and IDP Policies

Consequent upon instability in many countries in the region, stable countries are faced with the recurring challenge of playing host to significant number of refugees, asylum seekers and internally displaced persons. Evidence from many African countries show government cooperation with UNHCR and humanitarian agencies in assisting refugees, but general lack of institutions and infrastructure to provide shelter and food for the large numbers of immigrants remains a significant challenge (USCRI 2009). In Cameroon for instance, despite the adoption of refugee law (Law No. 2005/006) in 2005 consistent with the 1951 Convention relating to the Status of Refugees, and the 1969 Convention Governing the Specific Aspects of Refugee Problems in Africa (UN 2008), the country lacks credible refugee determination procedures, (which makes it difficult to distinguish refugees from economic migrants), a well defined repatriation policy, and mechanisms to administer targeted assistance to an overwhelming majority of refugees (UNHCR 2010). Similarly, despite the enormity of internal displacements in Nigeria, very few resettlements have been undertaken and in most cases there was simply no response from the authorities due to institutional and resource constraints (National Commission for Refugees (NCR) 2008; Je'adayibe 2008).

In addressing these challenges, the collaboration of relevant UN agencies and the IOM in supporting African governments have been underscored. Women and children are among those most affected in displacement situations and government agencies related to providing services in individual nations can be supported by inter-governmental agencies to provide services (health care, education, protections from human rights violations and sexual violence) for refugees and IDPs within their regions of jurisdiction.

Execution of Protocols of Regional Groupings on Integration

The spirited implementation of various protocols on free movement of people, as well as efforts to facilitate their establishment and settlement, could significantly promote less constrained intra-regional labor migration. Implementation of these protocols will deal an end to the gates that hinder not only intra African migration, but

intra-African trade, which is among the primary obstacles to regional economic development. Execution of integration policies around protocols on free movement of people will also deal with the challenges of managing immigration, which can engender resentment and lead to repressive policies, such as mass expulsions, that impose heavy costs on migrants and disrupt African economies. African regional integration becomes imperative in view of its potential to extend the role of intra-regional migration for development of both people and places. It is important to underscore the fact that the size of Africa is only 77.5 % bigger than the United States and Africa's countries are on average 23 % bigger than US States. Yet while American people and goods can internally migrate freely from opportunity deficit states to other states with better prospects across the United States, Africans, are either restricted to their respective countries or subjected to different legal and regulatory systems of 54 independent states, with complex political, economic and bureaucratic systems. Consequently, what would be a control free internal migration in the US, will amount to cumbersome international migration across Africa, with attendant multiple layers of immigration bureaucracies.

Expanding the Share and Enhanced Use of Remittances

In a 2011 report, the World Bank and African Development Bank identified migration as a vital lifeline for Africa, but acknowledged that more is needed to be done by African governments to realize the full economic benefits of the phenomenon. Firstly, out of the global remittance of about US$336 billion in 2007, about US$40 billion flowed to sub-Saharan Africa each year (Ratha et al. 2011b). While there is undeniable evidence that remitted funds reduce poverty in the origin communities, leading to increased investments in health, education and housing, with the diaspora also providing capital, knowledge and technology transfers, there is need for African Governments to focus on how to facilitate more remittances and how to channel diaspora remittances into formal investments, as well as how to enhance their micro and especially macro- economic impact.

In dealing with the challenge of expanding the use of remittances for investments with macro-development benefits, an innovative policy option that has attracted recent attention is diaspora bonds sold by governments or private companies to nationals living abroad. These bonds have already been successfully used to tap into assets of Israeli and Indian diaspora. With large professional diasporas in high-income countries, African governments could potentially issue these bonds to finance development infrastructural projects. A report credited to the chief economist and vice president of the African Development Bank (ADB) indicated that some African countries are moving in this direction, with the bank in the process of selling international bonds on behalf of Nigeria and Rwanda targeting their citizens abroad (Ighomwenghian and Yusuf 2011). According to the ADB's research, Nigeria has the potential to sell as much as $2 billion of the bonds and that companies and governments in SSA could raise as much as $10 billion a year by issuing diaspora bonds backed by remittance flows.

Making Remittances Cheaper

Affordability is identified as one of the most important barriers to remittance flows, as the transfer fee is a key cost component of sending remittances. The lower the transaction cost is, the greater the benefits and opportunities are for receiving families and countries to capture development gains and reduce poverty. Further, the volume of remittances from destination countries and the average total cost have been found to be closely correlated (UNCTAD 2011). While the global average total cost of remittances fell to 8.7 % in 2010, it remains high (World Bank and IFC 2010), particularly to African countries, which encourages the use of informal channels that create unnecessary burdens for African migrants and remittance recipients. Expert policy

recommendations has focused around reducing remittance transaction costs through stimulating greater competition among money-transfer agents; better access to banking services for migrant workers in remittance-source countries and households in recipient countries; harmonization of the financial infrastructure supporting remittances; and a better investment climate in the remittance-receiving country, for example, through removal of foreign-exchange restrictions (Ratha et al. 2011a). There are supports for post offices, savings and credit cooperatives, rural banks and microfinance institutions that have large branch networks to play important roles in expanding access to remittances and financial services among the poor and in rural areas. There is also need for government and multilateral agencies to assess the implications of telecom companies in Africa offering mobile money transfers and other financial services.

Diaspora Engagement Beyond Remittances

The transfers of social and cognitive resources by migrants for the benefit of origin-country development have gained substantial attention in the migration-development debate. Beyond remittances, the African diaspora can play important roles in the stimulation of political debate, the strengthening of civil society, the enabling of education and the emancipation of women and minority groups in countries of origin. In the context of globalization and transnationalism, the diaspora have become increasingly able to simultaneously engage with their countries of origin through improved technical possibilities provided by the mobile telephone, fax, (satellite) television, the internet and by remitting money through globalised banking systems. African nations would benefit from building on these platforms by making them effective and by encouraging innovations that will increasingly enable migrants to foster relationships, work and do business at home. Such forms of transnational economic, social and civic engagement seem to have acquired an increasingly collective dimension through the formation of diaspora organizations that explicitly aim to foster links with the countries of origin, provide small-scale aid and set up development projects. African countries may need to borrow a leaf from developing countries like Mexico, China and the Philippines that have already implemented such diaspora policies. In the region, recent report showed how some African countries are moving in that direction. For example, the Nigerian government has supported the formation of the Nigerians in the Diaspora Organization (NIDO), established in 2001 and modeled after similar organizations in China and India, as well as the Nigerian National Volunteer Service (NNVS), a quasi-government organization to coordinate the government's engagement with its diaspora. Despite challenges and setbacks, solid personal and institutional linkages have been achieved, including the establishment of a diaspora investment fund (Akwani 2007; NNVS 2006). Also many overseas-based scientists have established access to local research funds through the Science and Technology Trust Fund, with initiatives by professionals abroad in health insurance, mortgages, and registered pension and credit purchase schemes being implemented (Mberu and Pongou 2010). Similar groups that exist for other countries will need to be examined, adapted and adopted for each country's needs.

Database of Africans Outside the Region

One important limitation to studying and understanding African diaspora is lack of data. The evidence of under estimation of Africans in the labor market in the US and other OECD countries is linked partly to the significant amount of undocumented immigrants from Africa. Consequently, there is need to invest in data gathering and analysis to identify not only the number of African diaspora but also to understand their characteristics, composition, and potential human and material resource profiles

and contributions. Such an audit periodically will be a necessary input into regional development planning and policy making. The potential of such database have been demonstrated by the roles of the African Human Resources Program of the New Partnership for Africa's Development (NEPAD) and UNESCO, which created a database of Africans teaching in universities and high schools in Europe, USA, Canada and in the world, made available to African states and any other organization in the field of education and teaching in Africa. Such data sources will constitute an essential information base into which African Governments and development partners could tap in to identify the African trained workforce required to establish and maintain research networks, virtual learning networks, and policy reforms in the region.

Finally, crucial to the overall process of maximizing Africa's migration potentials for development is significant research investments in understanding internal, regional, and international migration, together with developing policies and institutional capacities to manage current and anticipated migration flows, and their implications for individual origin countries and region at large.

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Migration in Asia

13

Elin Charles-Edwards, Salut Muhidin, Martin Bell, and Yu Zhu

Introduction

Asia is the largest and most populous of the seven continents, home to more than three-fifths of the world's population. China alone accounts for one third of the Asian total, and India contributes almost as many, but the balance of 1.6 billion people still makes up a quarter of the global population count. With a diversity of ethnic and cultural groups, languages and geographic settings spread across half the globe, the continent provides a unique context for human mobility at a range of temporal and spatial scales. Differences in history, economic development, political structure and patterns of human settlement add complexity. Allied to this are marked variations in progress of the demographic transition, which not only shape the growth and composition of population, but also provide an impetus for mobility and drive urbanisation.

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According to the United Nations Statistics Division, Asia comprises 50 countries divided into five discrete sub-regions: Central, East, South, Southeast, and West (Fig. 13.1). Population mobility in Asia has a long and diverse history but recent decades have seen an unprecedented rise in the extent and diversity of migration, both between and within countries (Hugo 2005). The scale of this mobility is perhaps most readily apparent in the Asian diaspora, with some 78 million Asians resident outside their country of birth. But these figures are dwarfed by the extent of mobility within countries: in the first decade of the new millennium, more than 280 million Asians were living within their country but outside their region of birth (Bell and Charles-Edwards 2013).

These displacements result from a complex blend of forces – economic, social, political, and historical – within and beyond the Asian region. Their sheer scale and complexity presents a formidable challenge to scholarship and has generated a substantial literature. The key synthesis is due to Amrith (2011) who traces the history of Asian migration from the 1850s to the present day and argues that migration has been the essential force shaping modern Asia. Indeed, Asian labour migration is seen to have relevance well beyond the region, playing a central role in global economic transformation (Amrith 2011: 199). Several substantive contributions can also be found focusing on mobility in particular parts of Asia or certain

M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_13

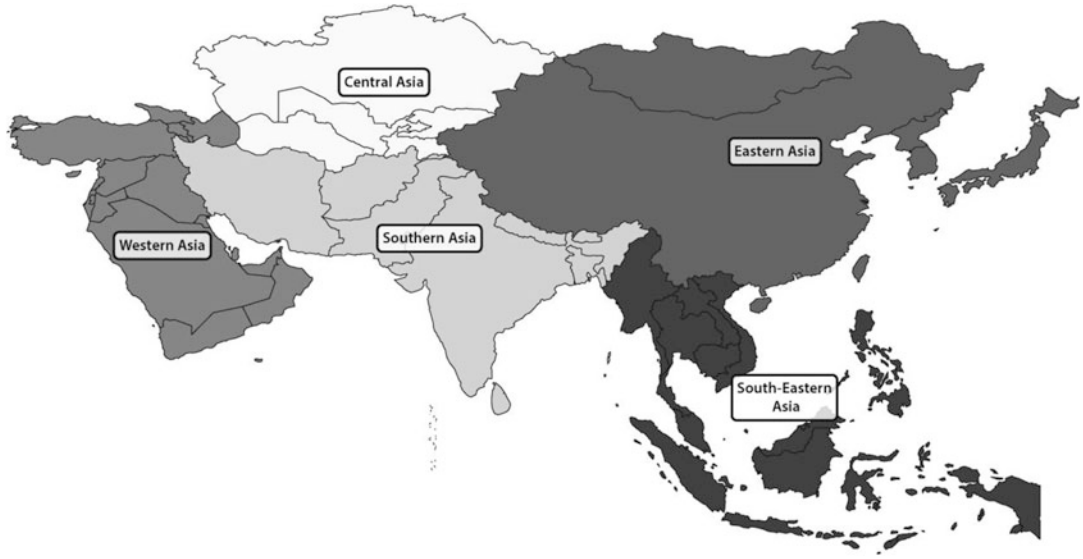

Fig. 13.1 Geographic regions of Asia

types of migration (see e.g. Castles and Miller 2009; Skeldon 1992; Hugo 2005) and there is a discrete and distinctive body of writing on the Asian diaspora (see e.g. McKeown 2005). Underpinning all this work is a burgeoning literature on the causes, patterns, dynamics and consequences of mobility, in its diverse forms, both in individual countries and across the region (see e.g. Zhu et al. 2013).

This chapter seeks to complement contemporary knowledge by drawing on two newly emerging sources of data that reveal the cumulative effects of migration between and within countries across the Asian region. We begin by reviewing the mobility transition as a framework for understanding human spatial mobility and explore the links between migration and development. We trace patterns of international migration, from and between countries in Asia, using data from the United Nations and The World Bank. Four migration systems are identified: the largest centred on the oil-producing Gulf States; a system of labour exchanges between Central Asian nations; a Southern and South-Eastern Asian system dominated by cross-border labour flows; and an emerging East Asian system. Using data from the IMAGE Project (Bell et al. 2015a), we then explore cross-national variations in lifetime migration intensity and patterns of spatial redistribution among 16 Asian countries. Our analysis reveals considerable diversity, reflecting differences in levels of urbanisation, in the effect of government policies, and in stages of economic development. We conclude by identifying commonalities and differences, and explore the idea of a distinctive Asian mobility transition.

Conceptual Framework

Understanding mobility across the broad sweep of space and time calls for grand theory. Zelinsky's (1971) classic hypothesis of the mobility transition stands as one of the few attempts to provide a broad theoretical framework against which to interpret trends and patterns of migration. Zelinsky argued that there were 'definite, patterned regularities' in the growth of mobility, linked to the modernization process, and identified five stages, paralleling those of the demographic transition, in which the level and forms of mobility changed over time. Zelinsky's thesis has been seen as time-bound and Eurocentric, incorrectly characterising traditional societies as immobile, overlooking the importance of colonial invasion and government regulation, and failing to recognise the diversity of cross-national contexts within which migration occurs (Zelinsky 1979,

1983; Cadwallader 1993). Despite these critiques, the idea of a mobility transition has proved remarkably durable. The concept has the singular merit of underlining the interconnection between different forms of mobility, identifying mobility as a universal phenomenon integral to the development process, pointing to the myriad forces that shape migration, and highlighting its temporal trajectories.

Subsequent elaborations have sought to adapt Zelinsky's (1971) thesis to selected sub-populations (e.g. Taylor and Bell 1996) and alternative spatial settings (e.g. Skeldon 1990). In practice, however, comprehensive evaluations are severely hindered, if not confounded, by the dearth of data available to trace the intensity and spatial patterns of multiple forms of mobility over a sufficiently lengthy historical period. Indeed, access to consistent, reliable data on population mobility, measured on a rigorous basis and comparable over time and between countries has arguably been the single most significant impediment to understanding migration at all levels of spatial scale (Bell et al. 2002). It is only within the last decade that the first comprehensive matrices of international migration flows have become available (see United Nations 2009; Bijak and Kupiszewski 2013; Abel and Sanders 2014) and harmonised statistics on internal migration across countries appear as yet to be out of reach, although considerable progress has been made (Bell et al. 2015b).

This chapter draws on lifetime migration data, based on country (for international migration) and region (for internal migration) of birth. Comparison of birthplace with country (or region) of current residence delivers a matrix of international (or inter-regional) migration flows. Lifetime data are the most commonly collected form of internal migration statistics in population censuses around the world (Bell et al. 2015a) but rarely feature in scholarly analyses. One reason for this neglect in cross-national comparisons is that aggregate patterns are differentially affected by age composition and by return and onward migrations. Setting these effects aside, however, lifetime data do provide unique analytical insights into the cumulative impact of migration by effectively charting the overall displacement of the population. Drawing on these data also allows us to make comparisons between a larger number of countries than would otherwise be possible. Data are also broadly comparable with lifetime migration data based on country of birth.

We utilise these datasets in two ways. At the international level we focus on identifying the patterns of Asian diaspora, reflecting the historical legacy of migration streams. Following Skeldon (2013), we then seek to identify and characterise the major migration networks between countries within the Asian region. For migration within countries, we adopt a more structured, systematic stance built around analysis of two discrete dimensions of migration – the level of overall migration intensity (effectively the proportion of people who have changed their region of residence) and the spatial impact of migration, as reflected in the migration effectiveness index (MEI) and the redistribution of population from low to high density regions. For a sub-sample of these countries, we seek explanation for differences in migration intensity, and in the observed patterns of redistribution, by reference to a suite of variables, implicit in Zelinsky's original hypothesis, which are thought to be closely implicated in various facets of population mobility.

International Migration in Asia

Data on international migration vary in coverage and quality around the globe. Information on national migrant stocks are commonly collected in national censuses using a question on country of birth or citizenship (Hugo 2005), but are also derived from population registers. By contrast, data on migration flows are collected at the migrant's point of arrival or departure; however, these data are rarely disseminated in a form useful for cross-national analysis. While lagging behind collections on fertility and mortality, there has been a concerted effort in recent years to assemble cross-national estimates of international migration. In this section, we draw on two sources: international migration stock data from

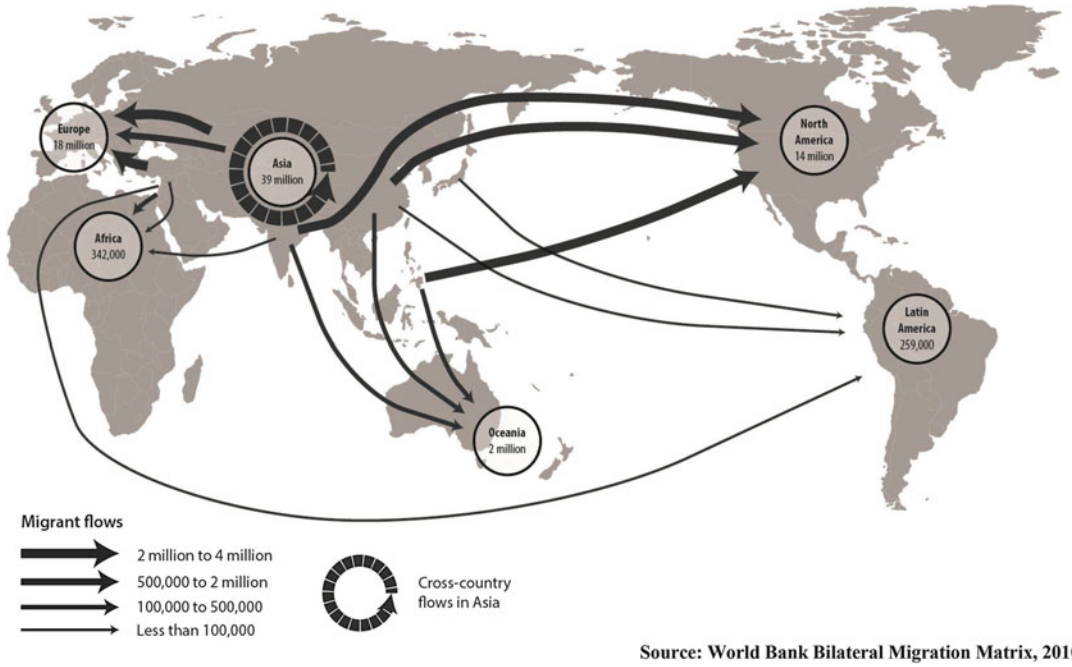

Fig. 13.2 International migration from Asia

the United Nations (2009) and bilateral migration stocks produced by The World Bank (2011). Both sources report the lifetime displacement of migrants, and as such, do not allow recent and historic migration streams to be discriminated. These data also miss temporary, seasonal, and circular migrants, which are a longstanding and numerically significant feature of Asian migration systems (Hugo 2006), as well as undocumented migrants which, in countries such as Thailand, are estimated to outnumber their documented counterparts (Huguet and Chamratrithirong 2011). Lifetime displacement data provided by the United Nations and The World Bank also underestimate the scale of the Asian diaspora as they exclude individuals who, although born outside their ancestral homeland, maintain cultural, social, and linguistic ties. In 2010, 8.3 million Chinese-born migrants were living outside China but the global Chinese diaspora is estimated at around 40 million (Li and Li 2013). Similarly, 11 million Indian-born migrants are living outside their country of birth – equating to half of a diaspora estimated at 20 million strong (Ministry of Overseas Indian Affairs 2012). Notwithstanding these shortcomings, data from the UN and the World Bank can provide useful insights into the magnitude and dispersal of Asia-born migrants across the world, and systems of international migrant exchange within Asia.

In 2010, an estimated 77.9 million Asians were living outside of their country of birth (World Bank 2011). Of these, half were resident in another country within Asia, a quarter in Europe, and a fifth in North America (Fig. 13.2). The global distribution of Asian-born migrants reflects the historic interplay of geography, economics and politics (Amrith 2011). Large communities of Eastern and South-Eastern Asians can be found throughout the nations of the Pacific Rim, while in Europe, migrants are primarily drawn from countries in west and central Asia. Latin America and Africa sit on the periphery of the Asian migration system, but they are still host to sizable Asian migrant communities.

Turning first to continents on the Pacific Rim, Chinese-born migrants are the largest immigrant group in both North America and Australasia.

Recent migrants follow earlier waves of migration in the nineteenth and twentieth century: first for gold and agriculture, then for commerce, and most recently as students and skilled professionals (McKeown 2005). Large scale Indian migration to North America and Australasia is of more recent origin, with many skilled professionals migrating to countries across the Anglosphere following Indian independence from Britain (Jayaram 2004). Filipino migration to the United States also follows in the train of earlier labour migrations initiated during the period of US colonial rule. After a period of decline brought about by the introduction of racist immigration policies in countries including the United States, Canada and Australia, the ranks of Filipino migrants swelled in the 1960s and 1970s, accelerating with the adoption of pro-emigration policies by the Filipino government (Gonzalez 1998). In 2010, 80 % of Filipino-born migrants outside of Asia were living in the United States, Canada and Australia.

An estimated 18.4 million Asian-born migrants were living in Europe in 2010. Turks are the largest group (3.9 million), over half of whom reside in Germany. The concentration of Turkish migrants in Western Europe is of relatively recent origin, initiated by a series of bilateral guest workers schemes in the 1960s. Following the abolition of these schemes in the early 1970s, family reunion and marriage migration became the dominant stream, lending permanence to what was initially a temporary migration. Notwithstanding, there is considerable return migration of Turkish migrants, with an estimated 390,000 returning to Turkey between 1990 and 1998 (Schiffauer 2005). Migration from the Central Asian republics of Kazakhstan and Uzbekistan to Europe was precipitated by the collapse of the Soviet Union in the early 1990s. The constitution of the Newly Independent States (NIS) led to the return of ethnic Russians to Russia and other Russophone countries (Robertson 1996). These were matched by reciprocal flows from Russia and other former Soviet States to the Central Asian Republics (Skeldon 2013). In addition to the streams described above, sizable communities of southern and south-eastern Asian migrants are found across Western and Northern Europe following former colonial linkages (e.g. South Asians in the United Kingdom) (Castles and Miller 2009).

The World Bank records relatively few Asian-born migrants in Africa (0.3 million) and Latin America (0.3 million). This can be traced in part to data issues, with a number of African and Latin American countries not collecting and/or disseminating detailed data on the origins of their foreign born populations (Ratha and Shaw 2007). According to World Bank estimates, in 2010 the largest group of Asia-born migrants in Africa were Palestinians from the West Bank and Gaza (123,350) living in Egypt and Libya. Sizable communities of Indian-born migrants are found in former European colonies in East Africa including Tanzania, Mozambique and Zambia. The Japan-born constitute the single largest group of Asian migrants in Latin America and the Caribbean, with most living in Brazil (71,367). This migration has been offset by a counter stream of Nikkeijin (the foreign born descendants of Japanese migrants) from Brazil to Japan, which in 2010 numbered more than 320,000.

The distribution of Asian migrants points to both continuity and change in global migration systems. Recent migration of Chinese to the New World, Filipinos to America, Indians to Oceania and Africa, and Japanese to Latin America, follow earlier migrations in the nineteenth and twentieth centuries, while the return of Brazilian Nikkeijin to Japan, and of migrants from Central Asia to Russia, are testament to the persistence of global diasporas over time. On the flip side, large scale migration of Turks to Western Europe demonstrates the power of policy to initiate large scale migrations over very short times frames, as well as the inertia of migration streams once established.

Asia is not simply a source of migrants, but also a destination in its own right. Fully half of all Asians outside their country of birth in 2010 were living in another country within Asia (39.5 million). A further 11.6 million migrants born in the rest of the world were living in Asia in 2010.

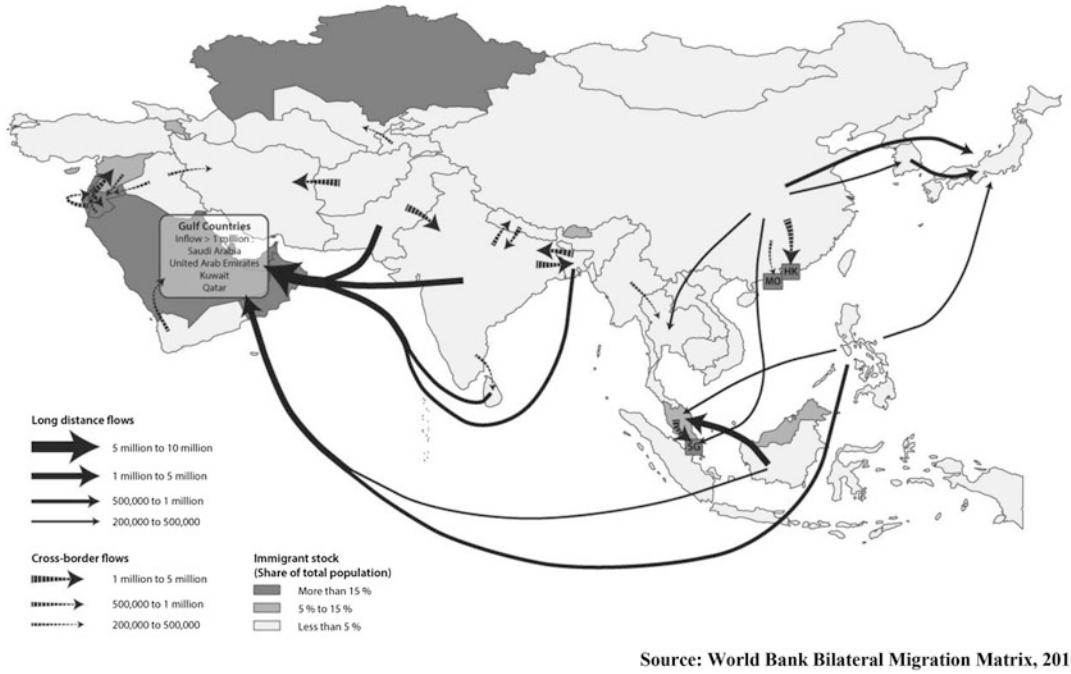

Fig. 13.3 International migration within Asia

There are marked regional variations in the scale and pattern of migration to Asia. Moving from west to east across the continent, there is a steady decline in the stock of international migrants as a proportion of the total population (United Nations 2009). In Western Asia, the overseas born made up 12 % of the total population; in Central Asia migrants account for 8 % of the population; in Southern and South-Eastern Asia international migrants account for around 1 % of the population; while in Eastern Asia this falls to less than half of 1 %. Local concentrations of migrants do exist in South-Eastern and Eastern Asia, and these act as local foci of a transnational migration surface stretching from the Gulf States in the west of the continent, to the city states of Singapore and Hong Kong in the east. Underpinning these trans-national systems are large cross border flows, driven by regional economic disparities, but also including refugees. Four distinct migration systems can be identified: a first centred on the labour deficit Gulf States; an emerging Central Asian labour migration system; a Southern and South-East Asian System characterised by outflows to the Gulf, but also large volumes of cross-border movements; and finally an East Asian system (Fig. 13.3). We discuss each in turn.

The six states of the Gulf Cooperative Council (Saudi Arabia, United Arab Emirates, Kuwait, Oman, Bahrain and Qatar) are the locus of the largest and most extensive regional migration system in Asia, with over 39 % of the population foreign born (United Nations 2009). Labour migration to the oil producing nations of the Middle East commenced in the 1940s, but expanded dramatically in the 1970s, making the Gulf the third largest migration region in the world (Castles and Miller 2009). Early waves of labour migration were dominated by migrants from the Arab States including Iraq, Syria and Jordan and also included a large number of Palestinian migrants displaced by the 1948 Arab-Israeli war. Flows to the Gulf triggered secondary waves of low-skilled migration to Jordan from North Africa and Western Asia to meet shortages of agricultural and domestic labour that were created by these streams. Following the mass expulsion of Arab nationals from the Gulf States during the 1991 Gulf War,

the catchment of labour migrants re-oriented to Southern and South-Eastern Asia, initiating large bilateral flows which have persisted well into the new millennium. Flows from Southern Asia to the Gulf are dominated by male construction workers, but there is an increasingly feminised stream of domestic workers drawn particularly from Sri Lanka, the Philippines and Indonesia (Skeldon 2013).

In the past decade, a new regional system of labour migration has emerged in Central Asia with Kazakhstan a key locus. Following the collapse of the Soviet Union, Kazakhstan became a country of emigration as ethnic Russians departed. This net outflow reversed in the early 2000s with the return of the ethnic Kazakh diaspora ("the Oralman"), and a growing demand for migrant labour triggered by a resources boom. The majority of these workers are drawn from other states of Central Asia, with migrants predominantly employed in the agricultural, mining and construction sectors. The 2011 World Bank data report more than 180,000 Uzbeks, 40,000 Azerbaijanis and 10,000 Tajiks in Kazakhstan in 2010. Lifetime migrants are eclipsed, however, by temporary and seasonal workers, estimated to exceed one million during the peak working season (Anderson and Hancilova 2011).

A third migration system comprising states in Southern and South-East Asia has evolved from historical exchanges between Southern Asia, China and the entrepots of South-East Asia (Amrith 2011). The contemporary migration system is partly characterised by outflows of contract labour migrants to the Gulf States from India, Sri Lanka, the Philippines and Indonesia. However, these flows are exceeded by labour exchanges across shared and sea borders within Southern and South-Eastern Asia including between Bangladesh and India, Myanmar and Thailand, and Indonesia and Malaysia. Cross-border flows are often irregular. For example, there were an estimated 3.3 million Bangladesh-born migrants living legally in India in 2010, and up to 12 million undocumented migrants (Datta 2012). Concern over the scale of illegal migration resulted in construction of the Indo-Bangladeshi barrier, a barbed wire and concrete fence along the 4,000 km border, in an attempt to stem these flows. Large undocumented flows have also been occurring in the Burma-Bangladeshi borderlands (Rohingya refugees) and on the Burma-Thai border. In 2010, some 288,487 Burmese-born migrants were documented as living in Thailand. This is a magnitude lower than the estimated one to two million undocumented workers in the Thai economy (Huguet and Chamratrithirong 2011). These movements are driven by a complex mix of political and economic considerations as well as development displacement (Grundy-Warr 2013). Significant cross-border flows are observed from Malaysia to Indonesia (1,397,684) and, although not captured in The World Bank estimates, reciprocal flows from Indonesia to Malaysia are also substantial (IOM 2010). Overlaying the system of cross-border labour flows between the Southern and South-Eastern states of Asia, is a migratory system of highly skilled professionals and their families, centred on Singapore (Hedman 2013), and forming part of a wider migration system stretching across Asia and into the global city network.

While the countries of East Asia record some of the smallest migrant stocks in all of Asia, they are an increasingly important destination for labour migrants, with around half a million South-East Asians living in countries of East Asia in 2010 (The World Bank2011). More significant are flows of co-ethnic migrants: the Nikkeijin of Latin America to Japan; the Chinese Chosonjok to South Korea; and mainland Chinese to Hong Kong (2,224,503) and Macao (246,441) to meet demand for low skilled labour in these economies (Skeldon 2013). These flows are accompanied by movements of highly skilled professionals to many East Asian cities including Hong Kong, Tokyo, and Taipei creating increasingly segmented systems of labour migration within East Asia (Jones and Findlay 1998).

Asia presents a highly variegated and dynamic international migration system comprised of origin, destination and transit regions, segmented labour flows of highly skilled and low-skilled professionals, the displacement

of refugees, large cross-border flows of undocumented workers, temporary, seasonal and permanent migrants and global diaspora. The volume of international immigration within Asia, and between Asia and the rest of the world, however, is dwarfed by flows of internal migrants, that is, of people moving between regions within individual Asian countries. In 2005, an estimated 280 million people had moved to another region within their country of birth (Bell and Charles-Edwards 2013).

Internal Migration in the Countries of Asia

Cross-national studies of internal migration are hindered by the lack of a central repository of internal migration data; by widespread variation in data collection practices; by differences in the interval over which migration is measured; and by variations in the spatial framework by which migration is defined. An understanding of the way internal migration data have been collected is therefore an essential pre-requisite to any cross-national comparison. Table 13.1 summarises internal migration data collections across the countries of Asia at the 2000 UN Census Round. Of the 46 UN Member States in Asia, 34 collected internal migration data at a Census. Lifetime migration data were the most commonly collected data type (26 countries), followed by data on duration of residence (24 countries) and migration measured over a 5 year interval (13 countries). Lifetime data are ubiquitous across all five regions of Asia.

We examine cross-national difference in the overall level of migration (as defined by the Crude Migration Intensity – CMI – Rees et al. 2000) and in the spatial patterns of lifetime internal migration for 16 Asian countries. Data were assembled from the International Integrated Public Use Microdata Series (IPUMS-International) (Minnesota Population Center 2014) and directly from national statistics agencies, and are held in the central repository of the IMAGE project (http://www.gpem.uq.edu.au/qcpr-image). The countries examined are shown in Table 13.2: collectively, they house over three-quarters of Asia's population.

Available internal lifetime migration data suffer from the same limitations as their international equivalents. Namely, they do not distinguish between recent and historic migration streams; they do not capture circular and seasonal migrants; and they do not identify undocumented migrants. Our ability to draw cross-national comparisons of internal lifetime migration intensities is further hindered by differences in the age structure of national populations which affect their cumulative lifetime exposure to migration, but also by differences in the shape and number of zones within a country and the pattern of settlement. While differences in age structure are largely intractable without access to age-specific mobility data, work by Courgeau (1973) and Courgeau et al. (2012) suggests pathways by which to adjust for differences between countries in overall geographic area and in the spatial frameworks used to capture migration. Computation of those indices, however, requires migration data at multiple levels of geography within each country and these are not readily available for lifetime intensity. Here, we attempt an alternative means of standardisation by plotting migration intensities against the population-weighted average area of the zones over which migration is measured. Setting migration intensities against average geographic area provides a partial control for differences in the geographic size of countries, and in the number of regions into which they are divided. By calculating population-weighted averages, we also adjust for broad differences in settlement distribution. While not definitive, this approach provides a useful framework against which to assess relative differences in lifetime migration intensities between countries.

Figure 13.4 shows lifetime intensities plotted against population-weighted average areas for the 16 countries in our sample. Bhutan records the highest absolute lifetime intensity, with just under a third of Bhutanese living outside of their Dzongkhags (district) of birth in 2005. Migration is measured across small geographic divisions

Table 13.1 Internal migration data collection in Asia

Region	Type of data						Total no. of countries collecting data by census	Total no. of countries collecting data by register	Total no. of countries in region
	Observation period					Duration of residence			
	One year	Five years	Other interval	Lifetime	Latest move				
Central Asia	0	0	0	4	3	4	4	5	5
Eastern Asia	1	3	2	3	2	3	4	4	5
South-Eastern Asia	0	6	3	6	2	3	9	2	11
Southern Asia	0	2	0	5	4	6	7	0	9
Western Asia	0	2	3	8	7	8	10	5	16
Asia	1	13	8	26	18	24	34	16	46

Source: IMAGE Inventory of Internal Migration data

Table 13.2 Data used for the analysis of lifetime internal migration in Asia

Region	Country	Year	Number of geographic zones
Central Asia	Kazakhstan[a]	2009	13
Eastern Asia	China	2000	31
Eastern Asia	Mongolia	2000	21
South-Eastern Asia	Cambodia	2000	24
South-Eastern Asia	Indonesia	2000	26
South-Eastern Asia	Malaysia	2000	15
South-Eastern Asia	Thailand	2000	76
South-Eastern Asia	Timor Leste	2004	13
Southern Asia	Bhutan	2005	20
Southern Asia	India	2000	35
Southern Asia	Nepal	2000	74
Southern Asia	Sri Lanka[a]	2001	25
Western Asia	Armenia	2001	11
Western Asia	Iraq	2000	15
Western Asia	Saudi Arabia	2004	13
Western Asia	Turkey	2000	61

Source: IMAGE Repository
Note: [a]Only total counts were available, therefore, the country is excluded from the analysis of spatial redistribution

(<2,000 km^2) which are therefore likely to capture a large proportion of all migrations. By contrast, one quarter of Kazakhstanis live outside of their province of birth which have an average area in excess of 180,000 km^2. While differences in settlement patterns cannot be fully accounted for, lifetime migration intensity therefore appears significantly higher in Kazakhstan than in Bhutan. Kazakhstan also exhibits higher levels of lifetime intensity than countries with similar sized regions including India (4.1 %), China (6.2 %) and Saudi Arabia (9.2 %). High levels of lifetime mobility in Kazakhstan can be traced to post-independence reforms, including the movement of the capital from Almaty to Astana, as well as large and persistent regional economic differentials (Aldashev and Dietz 2011). It is worth noting that while lifetime intensity in

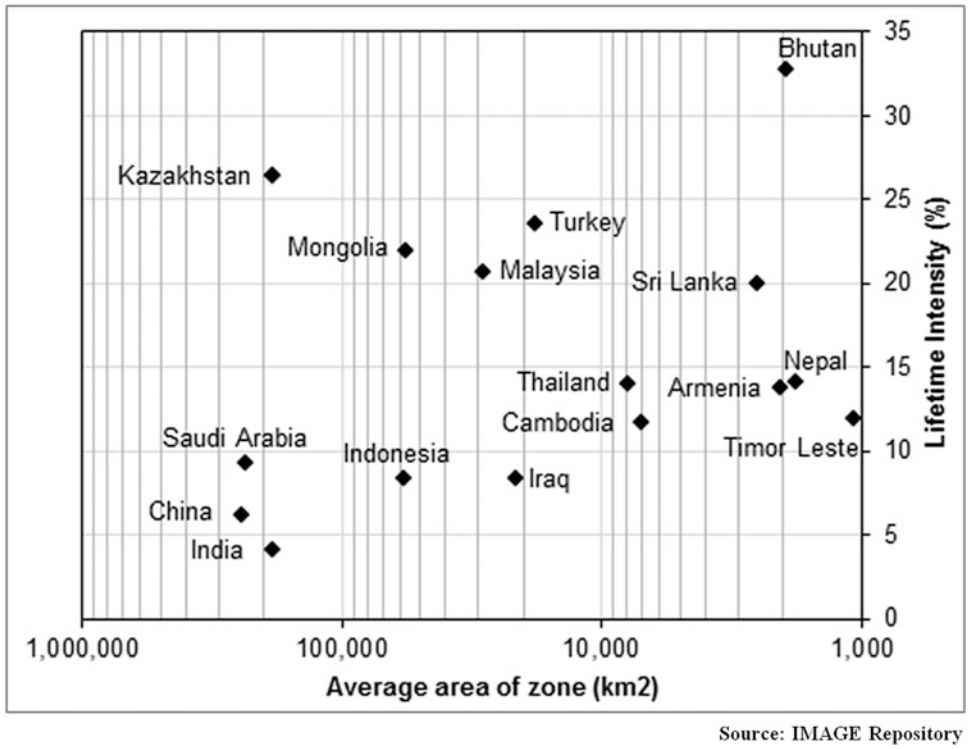

Fig. 13.4 Lifetime intensity by population-weighted average zonal area

India and China is relatively low in percentage terms, the absolute numbers involved are staggering, with 50 million and 80 million people living outside of their state and province of birth in 2000. Together these two countries accounted for half of the estimated 280 million lifetime migrants in Asia in 2005, and the available evidence suggest that these numbers are increasing (Bell and Charles-Edwards 2013).

Mongolia and Malaysia also record high lifetime intensities compared to countries with similar regional frameworks. In 2000, one in five Mongolians was living outside of their Aimag (province) of birth which average almost 75,000 km^2. High levels of lifetime migration between Aimags reflect progressive sedentarization of Mongolian society following industrialisation and collectivization during the Soviet period (Algaa 2007). One in five Malays was living outside of their State (20,000 km^2) of birth in 2000. This is the highest lifetime intensity recorded in any South-East Asian country, and compares to 8 % of Indonesians (73,824 km^2), 12 % of Cambodians (7,543 km^2) and 14 % of Thais (7,041 km^2). Adjusted for average regional size, the lowest lifetime intensity recorded is between districts of Timor Leste at just 12 %. This is despite districts having a population-weighted average area of just 1,000 km^2. Low lifetime intensities in Timor Leste likely reflect its nascent stage of demographic and economic development, and can reasonably be expected to increase over coming decades. Overall, Asian countries record lifetime migration intensities lower than seen in many other parts of the world including in the United States, Europe and Latin America and the Caribbean (Bell and Charles-Edwards 2013).

Movement intensities are useful indicators in their own right, but the significance of internal migration also lies in its role as a mechanism with the capacity to fundamentally transform national settlement patterns. The Migration Effectiveness Index (MEI) captures the degree

Table 13.3 Lifetime intensity, migration effectiveness indices and aggregate net migration rates, countries, Asia

Region	Country	Year	Number of geographic zones	Intensity	MEI	ANMR
Central Asia	Kazakhstan[a]	2009	13	26.4		
Eastern Asia	China	2000	31	6.2	44.9	2.8
Eastern Asia	Mongolia	2000	21	20.2	66.2	13.4
South-Eastern Asia	Cambodia	2000	24	11.7	50.8	5.9
South-Eastern Asia	Indonesia	2000	26	8.4	48.5	4.1
South-Eastern Asia	Malaysia	2000	15	20.7	39.7	8.2
South-Eastern Asia	Thailand	2000	76	17	44.3	7.5
South-Eastern Asia	Timor Leste	2004	13	11.9	56.8	6.8
Southern Asia	Bhutan	2005	20	32.7	37.1	12.1
Southern Asia	India	2000	35	4.1	35.4	1.5
Southern Asia	Nepal	2000	74	14.1	56.6	8.0
Southern Asia	Sri Lanka[a]	2001	25	19.9		
Western Asia	Armenia	2001	11	13.7	49.7	6.8
Western Asia	Iraq	2000	15	8.3	41.1	3.4
Western Asia	Saudi Arabia	2004	13	9.2	37.6	3.5
Western Asia	Turkey	2000	61	27	58.3	15.7

Source: IMAGE Repository
Note: [a]Only total counts were available, therefore, the country is excluded from the analysis of spatial redistribution

of symmetry in migration flows between regions, and hence the effectiveness of migration in redistributing population within a settlement system (Bell et al. 2002). The value of the MEI ranges between 0 and 100, with high values indicating that migration is acting as an effective mechanism for population redistribution, while low values signify a more balanced system in which flows are largely balanced by counter-flows, and little net redistribution is occurring. Table 13.3 reports MEIs for 14 of the 16 countries in the sample for which origin-destination flow matrices were available. Mongolia, Turkey and Timor Leste display the highest degree of asymmetry. In Mongolia, for every 100 migrants crossing an Aimag boundary, there was a net redistribution of 66 people from one Aimag to another. This is one of the highest lifetime MEIs recorded in any part of the world (Bell and Charles-Edwards 2013) and, coupled with extremely high levels of migration intensity, points to a profound transformation of the Mongolian settlement system over the past half century. MEIs above 50 were also recorded in Turkey (58 %) and Timor Leste (57 %). The most closely balanced lifetime migration systems were found in India with an MEI of 35 %, Bhutan (37 %) and Saudi Arabia (37 %), but these figures still represent very high levels of redistribution, with a net shift of one person to another State, District or Province for every three inter-regional migrants.

Migration effectiveness (the MEI) coupled with migration intensity (the CMI) delivers the Aggregate Net Migration Rate (ANMR) which indicates the overall transformative effect of migration on the settlement distribution (Bell et al. 2002). As shown in Table 13.3, high CMIs may combine with high MEIs, as in Turkey, leading to a substantial spatial impact, but they may also be offset by low values of the MEI indicating that relatively high levels of mobility are largely absorbed in reciprocal exchange, and hence generate little impact on the pattern of settlement. Elsewhere, migration intensities are lower, but combine with high effectiveness (as in Mongolia) to generate significant redistribution, while in India both figures, and hence the ANMR, are relatively muted. It is important to underline that cross-national comparison of these raw indicators must be approached with caution because of differences in the spatial systems used to measure migration, as outlined earlier. Nevertheless, the results do serve to underscore the considerable transformative effect of internal migration on the settlement systems of Asia over the longer term.

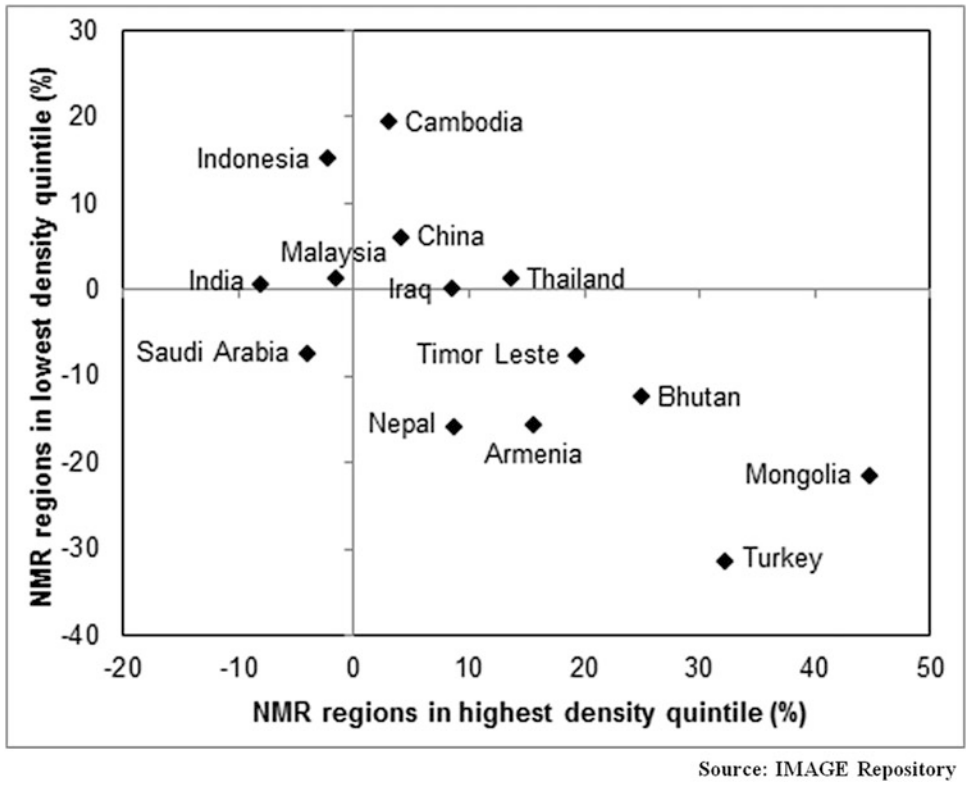

Fig. 13.5 Net migration rate by population-density quintiles

While the ANMR indicates the overall effect of migration in transforming the settlement system, it provides no information on the spatial pattern. Rural-urban migration is widely recognised as one of the dominant forms of mobility as countries pass through early and intermediate stages of the demographic transition (Dyson 2010). However, cross-national comparisons of rural-urban migration are prejudiced by differences in the way rural and urban areas are defined (United Nations 2000). To circumvent these problems, we follow Rees and Kupiszewski (1999) by adopting population density as a proxy for the level of urbanisation of a region. For each country, we calculate net migration rates for groups of regions which form the top and bottom population density quintiles. Figure 13.5 plots country-specific net migration rates for the lowest density band (i.e. "rural" areas) against net migration rates for the highest density band (i.e. "urban" areas) for 14 countries.

There is considerable diversity in the patterns of gains and losses. Only six countries (Armenia, Bhutan, Mongolia, Nepal, Timor Leste and Turkey) recorded losses in the lowest density band and gains in the highest density band characteristic of large scale rural to urban migration. A further four countries (Cambodia, China, Iraq and Thailand) also recorded net gains in the highest density band characteristic of large-scale urbanward migration, but also gained in the bottom density band. In the case of China, rural to urban flows have been countered by flows to the sparsely settled western and northern provinces. This is a remnant of Maoist programs of forced migration of young people from urban areas to rural and remote provinces, but also reflects recent economic development in western provinces driven by strong cross-border trade (Fan 2005). Large gains in the periphery of Cambodia are a legacy of the mass evacuations of Phnom Penh and other cities by the Khmer

Rouge in the late 1970s (Clayton 1998) but also reflect recent government resettlement programs and the rapid economic development of some border regions. Small gains in the least densely populated provinces of Thailand and Iraq are underpinned by large net gains in a small number of border and tourist centres.

Four countries recorded net migration losses from the highest density band (Indonesia, Malaysia, India, Saudi Arabia). Losses in the top density band in Indonesia, can be traced to net outflows from a number of Javanese provinces which were the target of the Indonesian transmigration program (Muhidin 2002). In Malaysia, losses in the highest density band are underpinned by intra-urban movements from Kuala Lumpur Federal Territory to Selangor state, which forms part of the Greater Kuala Lumpur metropolitan area. Taken in its entirety, the Kuala Lumpur metropolitan region continues to gain a significant number of migrants. Gains in the lowest density band are supported by movements to Pahang state which has been host to large scale land development projects (Saw 2007). Losses in the highest density band in India are driven by movements from the densely populated Gangetic Plain states of Bihar and Uttar Pradesh Losses are not uniform within this band, with New Dehli and Mumbai both gaining migrants.. In Saudi Arabia, density is a poor proxy for the degree of urbanisation, with the three largest centres (Riyadh, Jeddah and Mecca) all gaining through migration, even though the highest density band recorded an overall net loss.

This brief survey shows the continued dominance of rural-to-urban migration in Asian migration streams. However, this is accompanied by emerging processes of suburbanisation in the most developed regions. Movements down the urban hierarchy are driven by government sponsored programs of regional economic development (including resettlement programs) but also by growth in cross-border trade.

Internal migration is widely attributed to regional inequality and uneven development (Deshingkar 2006), and there is evidence both of push factors in the places of origin and pull factors in the places of destination in the Asian migration system. Out-migration is frequently associated with high rates of under- and unemployment in rural areas. At the same time, employment opportunities generated by labour-intensive manufacturing, construction and urban services are attracting large numbers of migrant workers to major cities from underdeveloped regions. Foreign direct investment and export industries play an important role but migration flows have been greatly facilitated by improvements in communication and transport networks (Deshingkar 2006; General Statistics Office-Vietnam and United Nations Population Fund 2004; Chamratrithirong 2007). In-migration is positively related to income at the destination, as in the case of India, although the relationship between rural poverty and out-migration is not so clear (Bhagat 2008).

Table 13.4 explores the role of these forces as determinants of overall migration intensity and migration to capital city regions, using a number of ranked variables selected to provide a broad measure of development. Framed in terms of cross-national comparisons, the results provide little evidence of any systematic association between migration and development, and this conclusion is supported by statistical analyses of the raw data with R^2 values close to zero. In the case of the CMI, this is not surprising since this measure of migration intensity captures movements at widely varying levels of spatial disaggregation. There is a suggestion in the data that, at the highest and lowest levels of human development, rates of out-migration from rural areas to capital city regions are low, suggesting that it is the process of development itself that triggers urbanisation. Thus, India, Indonesia and Nepal are all ranked low in terms of HDI and in terms of rural to urban migration, but so are Saudi Arabia and Malaysia which have the highest HDI ranks.

Although economic factors do play a significant role in the migration process, they are not the only driving forces. Family and marriage are important triggers of migration in Cambodia and India (Maltoni 2007; Bhagat 2008). In several countries including China, Cambodia, Indonesia,

Table 13.4 Explaining cross-national differences in migration using selected ranked variables

Country	Human development index (2010)[a]	GDP per capita (2005 PPP $)[b]	Income inequality (Gini) (2005–2010)[b]	% Urban (2010)[c]	Out migration from rural to capital city[d]	Crude migration intensity[d]	Number of geographic zones[d]
Saudi Arabia	1	1	na	1	9	10	13
Malaysia	2	2	1	2	10	3	15
Armenia	3	6	8	5	4	7	11
Turkey	4	3	3	4	2	2	61
China	5	5	4	8	14	13	31
Thailand	6	4	5	9	8	5	76
Mongolia	7	10	7	6	1	4	21
Indonesia	8	8	9	7	11	11	26
Iraq	9	9	13	3	7	12	15
Timor Leste	10	13	12	12	5	8	13
India	11	11	10	11	13	14	35
Cambodia	12	12	2	13	6	9	24
Bhutan	13	7	6	10	3	1	20
Nepal	14	14	11	14	12	6	74

Source: [a]United Nations Development Program; [b]The World Bank; [c]UN World Urbanisation Prospects; [d]IMAGE Repository

Malaysia and Mongolia, state policies and migration programs have also played an important role in shaping the migration process (Chan 1996; Tirtosudarmo 1999; Muhidin 2002; General Statistics Office-Vietnam and United Nations Population Fund 2004; Maltoni 2007).

Conclusion

Migration streams in Asia, as elsewhere in the world, pre-date the imposition of national borders. The distinction between international and internal migration therefore creates an artificial divide which fails to capture the essential continuity of the migration process. Indeed in many parts of Asia contemporary borders impose barriers across longstanding systems of migration exchange. Moreover at a fundamental level, internal and international migrations are driven by much the same sets of forces. Notwithstanding the weak associations in the cross-national comparisons reported here, the burden of evidence suggests that economic disparities between countries and between regions act as a powerful driver of mobility. They play a primary role in reshaping settlement patterns through rural to urban migration. Likewise, at the international level, it is economic forces that underpin the development of international migration networks.

Once established, migration streams, flows and networks develop a momentum which persists well beyond the initiating conditions. As a result, any single snapshot of migration captures the combined result of contemporary forces and historical conditions. In the case of Asia, complexity is added by waves of colonisation and subsequent withdrawal which have left no part of the continent untouched. Political forces are also evident in shaping the patterns of migration within several parts of the region, as in Indonesia's transmigration program, China's control of migration to the cities, and the Philippines' Overseas Guest Worker program. The idea of a single linear Asian mobility transition finds little support in the data, although there are associations between stage of economic development and the direction of rural-urban exchange. Frequent state intervention disturbs these processes, if indeed they ever existed in the form Zelinsky (1971) proposed. Bell and

Muhidin (2009) argue that Asia has displayed relatively low mobility, at least as compared with other regions of the world. Nevertheless, the sheer scale and complexity of the region, together with its wide disparity in economic development between and within countries, foreshadow persistent mobility both within and between countries in coming decades.

Acknowledgements The work reported in this chapter forms part of the IMAGE (Comparing **I**nternal **M**igration **A**round the **G**lob**E**) project supported by the Australian Research Council under ARC Discovery Project DP110101363

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Migration in China

14

Zai Liang and Qian Song

Introduction

China is on the move. Indeed, both internal and international migrations have been on the rise for the last three decades since China started its economic reform program. China's history-making internal migration has contributed enormously to China's economic miracle and also has had transformative impact on rural areas and China's urbanization process. International migration, both permanent and temporary has given rise to a new wave of Chinese immigrant communities across the globe, from North America to Europe, and more recently to Africa. At the same time, China is becoming a country of new immigrant destinations, increasingly attracting more and more foreigners to strive for the "Chinese dream."

In our view, this chapter on migration in China is timely and also very important for several reasons. First, the large increase in both internal and international migrations in China has already led to a large body of literature in English and Chinese. This literature is the result of scholars from multiple fields: demographers, sociologists, geographers, political scientists, to name but a few. A carefully review of the literature in this area and discussion of the state of the research on migration in China is a pre-requisite for moving the field forward. Second, migration is of course not news for China or for the world, what is fascinating for the Chinese migration case is that it allows us to debate and test the class of migration related issues (i.e. migration and development, migration and its impacts on migrant-sending places, globalization and international migration, and methodological issues of migration) on such a big scale that we have never seen before. What is also important to realize is that China continues to be a mixed economy, with both markets and strong government control in the society, thus migration theories developed mainly in the context of market society will not be sufficient to fully understand migration in China. In this sense, China presents a good opportunity to develop new perspectives on migration studies, perhaps taking both market economy and China's institutions into account. Third, internal migration and international migration in China contribute to China's urbanization process and it becoming one of the most important players on the world stage.

In this chapter, we aim to review major developments in internal migration, emigration from China, and to some extent international migration to China. Our review will focus on data sources of studying these types of migrations, major patterns and debates, and causes and consequences of migration waves. For the most part, we will focus on the period after 1949, the founding of the People's Republic. Given there is

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_14

a large increase in both internal and international migration after 1978, we will pay particular attention to the post-1978 period. We will discuss in the order of internal migration in China, emigration from China, and recent international migration to China. Our conclusion section will highlight key points of our chapter and identify major research priorities for the future.

Internal Migration

Overview of Historical Patterns

The late historian Oscar Handlin once mentioned that one time he tried to write a history of the United States, then he found out the history of the United States is the history of immigrants (as cited in Portes and Rumbaut 2006, p. 244). Although similar statement probably cannot be made about China, migration did play an important role in Chinese history. Like migration in other countries, large waves of migration took place as a result of war, famine, political upheavals, or sometime government intervention (Ge 1997; Lee 1978). Today, despite China having 55 minority groups along with the majority group of Han, a common writing system is being used for the whole Chinese population (Mackerras 1994; Poston and Shu 1987). In some sense, migration helped make China a multiethnic society. Historical geographer Ge's (1997) review of historical patterns of migration highlights several features of migration in historical China. One feature of historical migration is from Han concentrated places to areas that minority group members resided, thus leading to the role of migration in integration of minority groups in China. Other important features of historical migration in China include: migration from economically more developed areas to less developed areas, migration from locations with dense population density to places with low population density, and migration from places with land shortage to locations with land plenty.

Lee (1978) reminds us the important role of the state in this process in Chinese history. We certainly see the role of the state in orchestrating migration in migration of the post-1949 period: migration during the period of the Great Leap Forward, the sent-down movement of young people to the countryside, and migration to frontier areas and remote regions. In fact, if we review the migration history during the period of 1949–1978, one cannot help but to see the visible hand of the state. Particularly illustrative is the period of the Great Leap Forward when millions of peasants went to work in factories in cities, as China promised a fast-paced industrialization to catch the U.S. and the Great Britain. Soon it became apparent that China could not sustain that high a level of urbanization for its level of economic development at the time. Subsequently rural migrants had to be sent home to villages (Chan 1988). This large migration, however, left a major imprint in migration history, as several decades later, this large wave of migration can still be detected in social science surveys (Liang and White 1996).

Perhaps what distinguishes China from other countries in the context of migration is China's household registration system (*hukou*) (Chan 1988; Wang 2005). *Hukou* system was established in 1958 with the aim of controlling rural-urban migration. In fact, *hukou* has served a function beyond simply controlling geographic mobility, but has been integral part of China's stratification system. This is because *hukou* has been linked with entitlement and benefits for an individual in China. For a long time, an urban *hukou* ensures the privilege of employment, food ration coupons, health insurance, and housing, and school for children. The idea of food ration coupon may sound ludicrous for present-day China, given the country's current level of prosperity, but it was a reality for many years prior to China's economic reform. In fact, this mechanism of allocation food by *hukou* status was important, because without urban *hukou*, it was difficult for anyone to survive in any city let alone find a job.

As a result of the *hukou* system's control of migration, what we observe in China's migration pattern during 1950–1978 is more responsive to China's political swings than to economic development itself. For example, the movement to the

frontier areas of Heilongjiang and Xinjiang over those years reflects the government's plan to control frontier regions and to be part of large global political thinking (counter the potential threat of the foreign Soviet Union). Likewise the case of migration of millions of urban youth mainly reflected the political ideology of Mao Zedong rather than finding opportunities for urban youth in the Chinese countryside (Bernstein 1977). Thus migration theories developed in the context of Western societies are not particularly useful in predicting Chinese migration patterns during these time periods. This is because the fundamental assumption of most western migration theories is market economy which gives short shrift to political and institutional factors (Fan 2008). What is also ironic about internal migration in China is that despite heavy control of the *hukou* system on migration, the 1954 Chinese constitution actually guarantees citizens' right to move. So the right to move was on paper not in practice.

Market Transition and Rise of Migration in China

China's transition to a market oriented economy has led to a great economic prosperity for Chinese people and lifted millions of people out of poverty. What accompanied China's economic success record is a migration story. Two important factors are particularly relevant to the rise of migration in China. First the introduction of the household production responsibility system in rural China in the late 1970s, first in Anhui province and then expanded into other parts of China, has generated a sizable army of rural surplus labor. Like farm workers in other countries in the process of urbanization and industrialization (Williamson 1988), Chinese peasants at that time were a big mobile workforce that was ready to move to locations with factory jobs.

Like migration in other parts of the world, migration in China also shows a clear spatial pattern of destinations. In this case, southern China has been playing an extremely important role. This is related to China's economic development model in earlier stages of economic reform. As an experiment for market economy in the early 1980s, China began to designate several southern Chinese cities as "Special Economic Zones" as a way to attract international investment. In fact, three out of four cities designated as special economic zones are located in Guangdong province: Shenzhen, Shantou, Zhuhai along with of Xiamen in Fujian province. All of these cities have a long history of sending migrants to overseas destinations (Liang and Morooka 2008). Thus attracting overseas Chinese investment was also the intention of this plan. This decision made Guangdong province a major province of migrant destination as a huge flow of foreign investment arrived and labor-intensive factories boomed. Thus goes the popular term that "if you want to make money, go to Guangdong (东西南千中，发财到广东)." For the last three decades or so, Guangdong has been the most important migrant destination, receiving as high as one third of interprovincial migrants in China. In this section, we review the general trend of internal migration after China's economic transition in the late 1970s. We focus on migrants without local household registration, which is often referred to as the floating population. For this purpose, we will use data from national survey and censuses.

To review the trend of internal migration, we need to first define what the floating population is, as there are different estimates of the size of floating population by different sources using different criteria. The result is that one often reads the sizes of floating population that vary a great deal. In this chapter, we define floating population using three criteria: (1) *hukou* status, (2) duration of stay in the current location, and (3) geographic unit (province, county etc.). Using this framework, the floating population consists of individuals who have crossed county boundaries and stayed at destination for no less than 6 months without a local household registration. We define the floating population in this fashion mainly because we want to follow a consistent definition over time (Liang 2001a). We realize other scholars may define the floating population differently and whenever necessary, we will discuss

different estimates of the floating population using alternative definitions. We note also other scholars have compared China's floating population to the case of blacks in apartheid South Africa or the case of undocumented Mexican immigrants in the United States (Roberts 1997; Solinger 1999).

Using national survey and population census data, Liang and Ma (2004) present trend of inter-county floating population for the period of 1982 and 2000 and we updated their figure by including new information from the most recent 2010 Chinese population census. As we see in Fig. 14.1, in the first census since the introduction of economic reforms in 1978, the inter-county floating population was estimated to be around seven million. By 1990, it had reached to nearly 22 million. The size then doubled in 5 years from 1990 to 1995. The year 2000 saw another major increase in inter-county floating population to 79 million. For data from the 2010 census, we give two estimates for the floating population. The first estimate of 221 million is often cited in official reports. It should be noted this 221 million floating population actually include intra-county floating population. If we include only inter-county floating population, the estimate of the floating population in 2010 should be about 171 million. This is roughly about 13 % of the Chinese population.

Further analysis of data from the 2010 census reveals several important patterns. Among the inter-county floating population, the dominant pattern of the decade of 1990 is an increase in interprovincial floating population. The pattern began to move in different direction by 2010. The 2010 census data also reveal that within the inter-county floating population, the proportion of interprovincial migration began to decline by 4 %. This signals a significant change as China's interior and western regions presented more opportunities than the previous decade and began to attract interprovincial and inter-count migrants. The 2010 census also reveals a significant flow of city to city migration. Thus the typical story of peasant migrants flooding the Chinese cities is not complete and must be revised to reflect an evolving reality.

Migration, Hukou, and Life Chances

In this section, we discuss how China's migrants fare in their destinations, often cities. We focus again on two important measures in the stratification system: occupation and housing. As we discussed earlier, *hukou* has important consequences for occupational attainment and housing choices. What is important in the context of China is that there has been institutionalized discrimination again migrants with no local *hukou*. For example, a 1995 Beijing city document that explicitly lists the following jobs as eligible to individuals who have local *hukou*: managers in finance and insurance companies, accountant, casher, service staff in star-rated hotels, telephone operator, and warehouse staff (Bai and Song 2002). There is a penalty for employers who violate these regulations. An early study by Yang and Guo (1996), using the 1990 Chinese census, shows that migrants without local *hukou* clearly concentrated in industrial and tertiary industry sectors. Within industrial section, migrants tend to be engaged in jobs that are physically demanding, low skilled, and dangerous. This echoes other generalizations that migrants tend to work on 3Ds (dirty, difficult, and dangerous) jobs (Solinger 1999).

Underlying much of this line of research is the presumption that the major source of disadvantage for migrants is the lack of local *hukou* itself at destination. In other words, migrants with local *hukou* would not suffer this kind of disadvantage (Liang 2004; Wu and Treiman 2004). A more recent study in the case of Shanghai by Chen (2011) provides an innovative approach to studying consequences of *hukou* on occupational attainment by creating three categories of individuals: rural migrants, urban migrants, and local residents. Chen (2011) finds that at a low education level, there is evidence of discrimination against migrant workers (either rural or urban hukou but without local hukou at migrant destination). However, at the higher education level (e.g. above senior middle school), urban migrants enjoy same opportunity to work in good jobs. This finding is important in so far as

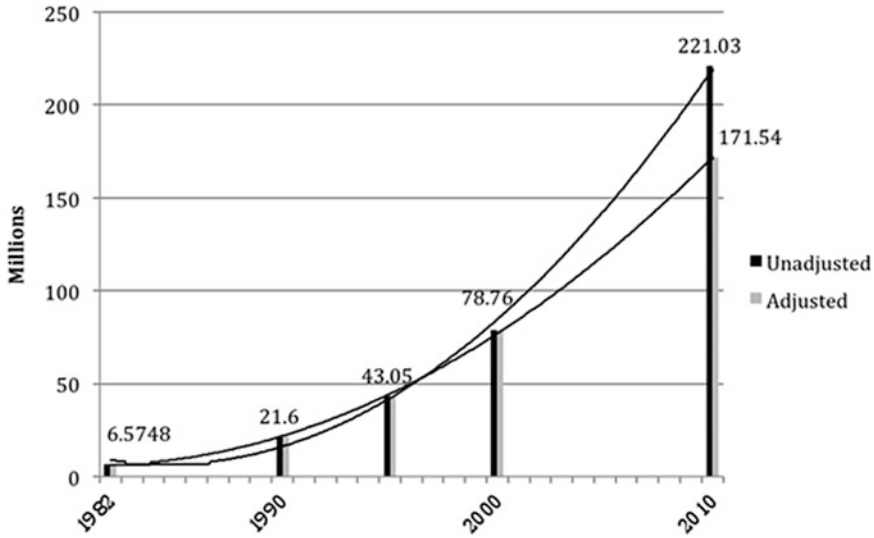

Fig. 14.1 Trend of floating population in China: 1982–2010 (Adapted from Liang 2012)

it informs us that not only migration status matters, migrant origin (rural/urban) matters well. Besides occupation, many scholars have studied earnings inequality between migrant workers and local residents (Li 2003; Wang et al. 2002).

Housing is another dimension of measuring migrant workers' welfare in destination areas. Housing stratification in urban China was historically linked to China's work unit (*danwei*) and cadre status. Thus, the housing allocation process in the old regime favored individuals who worked in high profile work units or individuals with cadre background.

Because of lack of urban *hukou* status, we expect migrants to exhibit different housing arrangements, and we summarize some of recent findings here. First, the residential distribution of the floating population is obviously different from that of urban population overall. A study on the floating population of Shanghai showed that from 1990 to 2000, migrants not only boomed in the inner suburb of Shanghai, but also further extended to outer suburban district where land and house prices were much lower than that in central urban district (Xu and Zhou 2003). Based on the 2000 census data, Kang and Ding (2005) focus on the dwelling conditions of the floating population in Pudong new district in Shanghai. They also found the location of floating population concentrated on the urban fringe with living conditions that were quite poor. To some extent, the floating migrants are segregated from local urban residents (Kang and Ding 2005).

Second, the neighborhood where floating migrants settle in is often poor. The 1997 census of migrants in Beijing shows that most migrants rent houses from local citizens or farmers. Overall, 39.6 % of migrants rent their housing unit. Over 20 % of the floating population resides in work-unit dormitory or construction camps, which are very simple and crude (Duan and Wang 2006). Guo et al. (2006) study the residential pattern of the floating population in Minhang District in Shanghai. They found that floating population mainly rent private houses (52.1 %) or temporarily live in a dormitory of a work unit (21.3 %). Another 13.2 % of migrants rent public housing. The situation is similar in Tianjin. Xia and Sun (2006) also found that about 25 % of floating population live in sheds on construction sites, and quite a few rent private housing on the city periphery or reside in dormitories provided by their company.

Third, the quality of housing conditions for migrants is much poorer than that of local urban residents. For example, the average number of

rooms owned by a migrant household in Beijing was only 1.4 in 2000, while the comparable statistic for local citizens was 3.02. The average building area for a migrant in Beijing is 12.81 m^2, which is about half of that possessed by a local resident (Duan and Wang 2006). In Shanghai, the average living area for one migrant was only 8.1 m^2 in 1999, which was less than one-third of that of for local residents (Wu and Wang 2002).

The improvement in housing quality may have little positive impact on the floating population, not only because they are excluded from the mainstream housing system but also because of their housing choice behavior is determined by their somewhat unsettled nature: many move repeatedly as their jobs change in the city. Somewhat surprisingly, given the overall inadequate and deteriorative housing conditions, floating migrants actually expressed less dissatisfaction with their current housing situations than the locals. Wu and Wang (2002) show that 13.4 % of temporary migrants felt dissatisfied or very dissatisfied with their current housing, while 38 % of local residents expressed dissatisfaction. This may be because common local residents feel more relative deprivation from the housing reform when they confront the growing gap between themselves and previous privileged class. For average locals, the rent for public housing increased greatly and some of them could not purchase the public housing they already occupied at the discounted price, let alone the commercial housing on the market. However, the relatively low dissatisfaction with respect to housing should not obscure the fact that temporary migrants are generally in poorer housing conditions.

Housing stratification in the West tends to be dominated by issues of socioeconomic status and race, but the story is different in China. Migrants' housing choices are constrained by socioeconomic factors as well as by institutional forces such as *hukou* status and administrative rank of work units. In principal, migrants may purchase commodity housing from the open market in cities, but bank mortgages are not available to them. In the secondary housing market, a local *hukou* is often required to buy these older housing units. Only qualified local urban residents can obtain subsidized public housing for low-income families (jiekun fang) at below market rents. Both renting and owning are exceedingly expensive in the open market sector, especially when compared with the subsidized sectors. Therefore, urban floaters (especially those migrating from rural to urban areas) pay a much higher price for housing than the permanent residents, even though their living space was smaller (Jiang 2006).

Echoing earlier studies on occupational attainment, Logan et al.'s recent study (2010) on access to housing in urban China again demonstrates the importance of migrant origin. For example, they find that established migrants with urban origin suffer no major disadvantage as compared to urban natives. This is in sharp contrast to rural migrants who are in a disadvantaged position on many housing outcome measures. This again strengthens the argument that we should not only pay attention to differences between migrants and local residents, but perhaps more importantly, explore differences among migrants with rural and urban origins.

The Impact of Migration on Children

China has the largest migrant population in the world. As a consequence there is also a record number of children who are affected by this monumental migration process. By most recent estimates, the number of migrant children (age 0–17 years) in migrant destination areas are about 36 million (Duan et al. 2013). The estimate of migrant children in destination areas would be 25 million if we only include children of 0–14 years old. Another group of children affected by migration are what are called "left behind children", namely children for whom at least one of the parents migrated. The estimate of the number of left behind children was around 58 million during the mid-2000s and had reached to 69 million by the time of China's 2010 census (Duan et al. 2013). All told, about at least over

100 million children who are affected by the migration process. Below we discuss main issues facing these children, focusing on education and health. As China moves more and more towards a market economy, education will become increasingly important. As we discussed earlier, many of today's adult migrants congregate in low skilled jobs. The extent to which migrant children will break this path and move toward a higher position on the socioeconomic ladder is determined in large part by their educational attainment.

For a long period of time, the main issue facing migrant children was their education in local public schools in the destination. The basic argument of many local education officials was that because the education budget is based on registered population, admission of any migrant children means that the city would have to bear an additional fiscal burden (Liang and Chen 2007). Of course, this story is only partly true as many migrant parents contribute to tax revenue as well. This reality provided the counterargument that their children should enjoy the benefit of public school education. Central government policy has gone through several stages. In earlier years, the policy guideline is that both migrant destination and migrant origin governments should coordinate education of migrant children. At another point, the policy guideline changed tone to say that the migrant destination government should be primarily responsible for education of migrant children. The 2007 guidelines from the Ministry of Education finally made it very clear that the local government in the destination bears the responsibility for educating migrant children (Liang et al. 2008a). The ambiguity in the earlier years gave local public schools an opening to charge high "education endorsement fees" to enroll migrant children. Even to the present time, when the policy is clear that migrant children should not be charged extra money for education in local public schools in destination places, many schools continue to find creative ways to charge extra money for migrant kids. The high expenses of education for migrant children have also led to the mushrooming of many migrant sponsored schools (*dagong zidi xuexiao*) which tend to have inferior facilities and less qualified teachers.

As far as education measures are concerned, earlier studies suggest low school enrollment of migrant children. In particular, migrant children who arrived within a short period of time tend to suffer the most and the school enrollment improves as migrant children spend more time in cities (Liang and Chen 2007). Using an origin-destination linked approach, Liang and Chen (2007) also find that migrant children actually had lower levels of school enrollment than non-migrants in migrant-sending communities. This is unfortunate given most migrant parents migrate precisely because they want their children to have a more promising future, including a good education. However, more recent studies suggest that the school enrollment level for migrant children seems to be close to the level of local children, mainly because migrant children now have other choices of attending school (Liang et al. 2008a). In other words, if migrant children cannot afford to attend local public schools, they can attend other schools, especially migrant-sponsored schools (*dagong zidixuexiao*). Using data from 2010 China Survey of Floating Population, China's National Population and Family Planning Commission reported that a large majority (74 %) of migrant children are now enrolled in local public schools (MSBCNPPC 2011). This is largely consistent with data from the nine-city survey of migrant children (Liang et al. 2008b). Thus the key research questions for these migrant children are who gets to go to public schools and the extent to which school choices affect migrant children's education and psychological outcomes.

The second issue concerning the impact of migration on children is the issue of left behind children. This is an issue that has drawn much attention for the last few years. There are many media reports and books on this topic (Ye and Murray 2005). Newspaper reports almost uniformly contain stories of negative consequences: school dropout, emotional suffering, over burden with farm work, delinquent behaviors, and criminal victimization. The most recent report of the

deaths of five left behind children (who died of carbon monoxide while sleeping in a dumpster) again captures people's attention (CNN 2012). Although mass media's reports draw the issue of left behind children to the public attention, more systematic research is clearly needed.

So far scholars have focused on both education and health of left behind children. Absence of parents is thought to cause disadvantages for children's emotional development. One can also argue the lack of parental supervision for school may also lead to poor student performance. Parent absence in rural China also presents a potential for added burden of household chores (cooking and household work), taking care of minor children (by older left behind children), and sometimes farming in harvest season. All these factors mentioned above can elevate stress levels that adversely affect health. So far empirical evidence tends to be mixed. Using data from Hunan province, Wen and Lin (2012) reveal that left behind children were disadvantaged in health behavior and school engagement but not in perceived satisfaction. A recent study by a group of economists suggests that left behind children (7–12 years old) are more likely to be underweight, perhaps related to the increased household burden/chores in the absence of parents (de Brauw and Mu 2011).

Two recent studies using longitudinal data from China Health and Nutrition Survey have examined the issue of education and they did not find substantial differences either in school enrollment or years of schooling between left behind children and children who live in other types of households (Guo 2012; Lu 2012). Lu also reported that migration of siblings has beneficial impact on left behind children's education. The lack of evidence of negative consequences for education may be comforting, but we need to have more information about what happens in school, how much effort students put in and how well they perform in school.

For older migrant children in urban China, there is also an issue of what to do after middle school. China's mandatory education law requires education of children up to 9 years, which corresponds to middle school. Assuming migrant children finish middle school, they face two choices: either return to their hometown to attend high school or get a job in the destination. The reason for this is that migrant children with no local *hukou* are not allowed to take the college entrance examination in destination cities even if they can afford to attend high school there. Right now, this is a hotly contested topic. The main issue is that local children with city *hukou* (i.e. Beijing *hukou*) enjoy a major advantage in terms of college selection compared to migrant children who take college entrance exam in their hometown provinces. This case gets to the core of urban-rural differences and the division between local *hukou* residents and migrants.

It is difficult for these young migrants to return to their hometown, as many of them have lived in cities for a long time. Some turn to the labor market to support their families, while others remain idle. A recent study examined the issue of school vs. work for migrant children 12–18 years old and found that migrant children who are from economically disadvantaged households are more likely to be working or idle than attending school (Lei and Liang 2012). This is a major concern, since entering the labor force prior to finishing high school could limit the chance for upward mobility. Idleness among migrant raises the prospect of participation in street gangs, delinquent behaviors, or other illegal activities.

In 2012, the call for migrant children to take their college entrance examination in their destination location is gaining a lot of momentum. On September 1, 2012, the Office of State Council document requires local governments to initiate new policies to solve the issue of college examinations in migrant destination ("*Yidi Gaokao*" 2012). As of December and Guangdong) both announced they are not ready to allow migrant children to take college entrance exam 2012, the two major migrant-destination regions (Beijing in migrant destinations. The battle for migrant children's rights for education is sure to continue.

Migration and the Transformation of Rural China

One of the most contested issues in the migration literature is how migration affects development. The topic can be explored in internal and international migration. The issue takes on considerable policy significance. If migration can realize its potential for development in migrant-sending communities, policy-makers would be encouraged to design policies to facilitate this redistribution process. The issue is especially important in the twenty-first century as translation, internet, and other technologies have markedly reduced the effective distance between migrant origin and destination. In this section, we review studies that link migration to development in migrant-sending communities. In particular we focus on several issues: return migration, return migrant entrepreneurship, and poverty alleviation (including remittances).

Return migration is one of the ways to affect development in rural China. Return migration has been the subject of several recent studies. In a series of papers, Ma (2001, 2002) made strong statements about the important role played by return migrants in China's rural transformation. Using a 1997 survey of return migrants in nine Chinese provinces, Ma's research (2001) found that the skills and entrepreneurial abilities acquired by the rural migrants in the urban labor market can greatly facilitate their occupational transition into non-farm jobs after they return home. Furthermore, Ma (2002) suggested that the returnees' improved human capital tends to reinforce the mobilization of their social capital in their natal communities, which in turn enhances income returns to rural entrepreneurship.

Using household survey data from migrant-sending areas in China, Zhao (2002) analyzed the determinants and consequences of return migration. One of Zhao's main findings is that return migration is mainly motivated by prolonged separation from families and the ensuing desire to reunite, rather than failure at landing a well-paying job. Somewhat surprisingly, Zhao (2002) also showed that return migrants and non-migrants at the origin places have equal chances of engaging in non-farm work once relevant characteristics are taken into account, including but not limited to factors like education. Consistent with Zhao's finding, recent study of return migration by Wang and Fan (2006) underscored family demand as an important reason for return migration. Wang and Fan (2006) also showed that return migrants are negatively selected (possess lower skill levels) among migrants. Return migration can also be measured by attitudinal questions on migrant intensions. Zhu and Chen (2010) reported that nearly 70 % of migrants expressed desire to return during the first decade of the twenty-first century (also see Shen and Chiang (2011)).

Another study measures return migration within a 5-year interval using 1995 China 1 % Sample Survey and the 2000 Chinese census (Chunyu et al. 2013). Their results suggest that nearly 30 % of the interprovincial migrants from Sichuan to Guangdong province have returned to Sichuan. The rate of return migration from other provinces to Sichuan is about 10 %. They suggest that this flow of return migration indicates that migration in China may have entered a new phase, i.e., a stage at which migrants are ready to make significant contributions to the economic development of migrant-sending areas. Data from the 2005 China 1 % Population Sample provide further support for the view that return migration is very important in the first decade of the twenty-first century. Data from Sichuan province, one of the most important migrant-sending provinces in China, show that there were 276,000 return migrants from Guangdong province to Sichuan province during 2000–2005. The period of 2005–2010 saw another large flow of return migration albeit a smaller one than the earlier period. This is in sharp contrast to a much smaller number of return migrants during the period of 1995–2000. Fieldwork in Sichuan province identified several factors are important in stimulating return migration (Chunyu et al. 2013).

So far we have discussed return migration in general. We now turn to a special group of return migrants, namely return migrant entrepreneurs. This group of return migrants deserves attention because of potential financial capital, human capital, and social capital that they possess that can be transformative in rural China. Many of them have financial capital because they are successful managers or entrepreneurs prior to return to hometown. The typical story of return migrant entrepreneurs is that they departed for coastal regions some years ago as workers. Over the years, they have transformed themselves from workers to managers and in some cases to entrepreneurs (starting their own businesses in coastal regions). In that progression, they have accumulated substantial amount of financial capital. In addition, they have human capital because of their experiences and expertise in specific industries (shoe making, garment industry). Finally they have social capital that is embedded in their business and social activities. They have business ties with people at different stages of manufacturing and they have ties with important people in hometown areas.

There are two recent systematic studies of return migrant entrepreneurship using large survey data: one by Bai and Song (2002) and the other by Han (2009). Bai and Song (2002) did a major survey of return migrants in the late 1990s in Anhui and Sichuan. They identified several factors that motivate return migration and entrepreneurship. One major factor they identified is local government support and explicit policies to encourage return migration and entrepreneurship. Many return migrant entrepreneurs mentioned reunion with family members by running business in hometown regions, especially taking care of children and the elderly. Some return migrants also reported getting no respect living in cities because of their rural origin (Bai and Song 2002).

Han's (2009) recent study provides updated information on return migration in the age of global financial crisis. The global financial crisis has caused many factories in China's coastal region to close down. From the perspective of factories in coastal China, the global financial crisis could not have happened at a worse time because just on January 1, 2008 China's New Labor Law went into effect. The New Labor Law requires employers to provide a written contract for each employee, and employers who fail to follow labor laws will suffer major financial penalty. The new Law restricts the use of probationary periods for workers as well as short-term contract workers and would also allow employees to sue the employers if they fail to follow the labor law. Han (2009) relied on two very important data sources. One is the 2007 survey of 100 counties in China that include over 3000 return migrant entrepreneurs. The second is a survey of 100 villages during early 2009 to capture the impact of global financial crisis on rural migrant entrepreneurs. Findings from the 2007 survey of return migrant entrepreneurs reveal that migration experience is an incubator for entrepreneurship. Individuals with migration experience have accumulated capital, gained knowledge and workplace techniques, and obtained information about markets, necessary conditions for business formation. In addition, migrant entrepreneurs also capitalize on their experience on a particular industry (i.e. shoes) and continue to maintain connections with former migrant destinations.

Han's characterization of entrepreneurial activities are consistent with a recent study by Liang (2011) based on the case of Jintang county (金堂县), about 50 miles from the capital city of Chengdu, Sichuan province. Jintang county sends large numbers of migrants to Guangdong province and is the subject of several recent reports (Liang 2011; Xu 2002). It is now the site of China's first Museum for Migrant Workers established in 2011. Partly because of its long history of migration, as early as 1999 the county started efforts to attract return migrants. In 1999, it established its first Special Zone for Return Migrant Entrepreneurs in one of the towns in Jintang. Since 2005, local towns were actively developing a real estate market and building new apartment buildings, with the hope of attracting return migrants to purchase these apartments. By 2009, the town was designated by China's Ministry of Agriculture

as China's Model Zone for Migrant Entrepreneurs (全国农民工创业示范园). In the last few years, the efforts to attract more return migrant entrepreneurs have gained momentum. The county government has set aside substantial land to build factory workshops. To attract return migrants, county level officials have been traveling to Guangdong province during the Chinese New Year to sponsor workshops. The goal is to make Jintang county the center of shoemaking industry in southwest China. Rural development initiatives such as those in Jintang county are spreading into other parts of China. In many ways, this new development is not by accident. One crucial factor is planned growth of infrastructure projects as part of the central government's western China development strategy (Naughton 2004). Migration scholars have long argued that such development of infrastructure is very important for rural development (Durand et al. 1996). With such a large-scale development in rural China, the local demand for labor is expected to increase dramatically, ensuring employment opportunities for return migrants.

Emigration from China

Having discussed patterns and new trends of internal migration in China, we now move to the topic of emigration from China, which quickly rose as an important demographic issue that drew attention from both scholars and the public in recent decades. We will review policy changes and emigration patterns by time periods during 1949–2010 with a focus on the post-reform period since 1978.

Periods of Emigration from China

Period of Restriction: 1949–1977

After the establishment of the People's Republic of China (PRC) in 1949, international migration from China was tightly controlled, thereby international migration was subsumed for a few decades. Being in the Cold War confrontation, the new Chinese government maintained strict regulations over both immigration and emigration for nearly three decades between 1949 and 1978. Toward the end of this time period, emigration from China was moderately encouraged by the end of the Cold War and an improvement in China's relations with other countries. Nevertheless, the emigration increase was limited. For example, from the perspective of one major destination country of the United States, the 1970s saw 17,627 Chinese immigrants obtained permanent residency (green card) in United States. This number grew about tenfold and reached to 170,897 during 1980–1989 immediately after migration regulations were relaxed near the end of 1970s (Department of Homeland Security [DHS] 2012).

Perhaps the only exception to this restrained trend of international migration from China in this period was its two massive outflows to Hong Kong (Skeldon 1986, 1995). The first of the two waves was during 1949–1950, when migrants from mainland China fled out due to constant warfare and fear of a new communist government. The next wave of emigration from mainland China to Hong Kong in 1962 was a result of the nationwide famine, mainly caused by the Great Leap Forward. In the latter case, the Chinese government temporarily loosened emigration controls and an estimation of 120,000 migrants from the proximate Guangdong Province entered the land of Hong Kong within a few weeks, though over 60,000 were later deported (Podmore 1971).

1978–Present: New Migrants (新移民) from China

In tandem with the economic reforms, signified by the "open door" policy, the year 1978 witnessed a drastic relaxation of restraints on international migration on the part of Chinese government. Individuals who wanted to emigrate for family reunions, educational study or other pursuits were routinely granted. Great outflows then transpired. Between 1979 and 1985, around 350,000 new migrants had crossed the border.

The span 1985–1986 witnessed the implementation of the Law of the People's Republic of China on the Control of the Exit and Entry of Citizens, which defined moving across borders as the right of citizens and to a certain extent decoupled emigration from general politics. The next 10 years experienced a soaring number of 5,600,000 outflows from China, including both temporary visitors and long-term emigrants, with at least 600,000 settled down in destination countries (Zhuang 2000). This unprecedented "going abroad fever" (出国热) was captured by a series of novels and TV shows in the early 1980s and 1990s in China, such as the non-fiction novel "Wandering around the World Scale" (世界大串联) by Hu Ping (1988) and the TV drama "the Beijingers in New York"(千京人在纽约). These were apparently well received and stimulated heated discussions among the public on the lives of Chinese emigrants in their destination countries. Controls on Chinese going abroad were further loosened after 2002 when the requirement for a foreign invitation and approval from the local Public Security Bureau before leaving the country was abolished.

Hand in hand with the loosening of control over emigration, the orientation of the Chinese government shifted from preventing people from going abroad to encouraging return migration. A wealth of effort was thus devoted to stimulating investment from ethnic Chinese overseas and attracting highly skilled migrants to go back either temporarily or permanently and contribute their financial or intellectual resources to China. Government agencies at various levels, especially of the areas who have histories of sending emigrants before the 1950s strived to build connections with a set of Chinese overseas organizations through which to draw business investment and educational or other local projects. At the national level, in 2000, 2001 and 2007, a series of "comments" (意见) were published consecutively as a result of a joint effort of government bureaus to relax the constraints of studying overseas and enhance the effort of drawing back returnees ("Comments" 2000, 2001, 2007). As a result, a variety of projects both at national and regional level have been set up to stimulate return migration, and cooperation with overseas academia has been intensified.

As early as the 1990s, some major cities in China, such as Shanghai, Beijing and Shenzhen, started to compete for returning Chinese professionals and students by creating "venture parks" and introducing preferential policies such as reduced tax rates, special loans and subsidies. Subsequently, other cities like Suzhou and Jinan followed suit. Higher education undertook parallel efforts, recognizing achieving the goal of creating world-class universities would require scholars with foreign PhDs. Thus, a series of programs were put forth by the Ministry of Education with additional private support. Such programs include "Scientific Research Foundation for the Returned Overseas Chinese Scholars" (留学回国人员科研启动基金) since 1990, "Chunhui Program" (春晖计划) in 1996, "Hundred Talents Program" (百人计划) since 1994, the ongoing "the Cheung Kong Scholar Program" (长江学者计划) since 1998, and "The Recruitment Program of Global Experts" (or Thousand Talents Program, 千人计划) since 2008, just to name a few. Those programs along with other regional plans for returnees help create favorable research environment as well as improved living environments, such as skipping salary grades, free of choice *hukou* locations, special pensions and awards, settlement for spouse and children etc. (See Xiang (2005) for a detailed description of governmental programs in this regard.) These programs took into effect immediately after their initiation – the impact is discussed in a later section.

Changing Patterns of Emigration

New emigrants refer to emigrants who left China after the year 1978, as opposed to prior emigrants, especially those departing before the establishment of PRC (Bail and Shen 2008[1]; Li

[1] Bail and Shen (2008) narrowed this term to cover only skilled migrants who left China after 1978.

2001; Liu 2005; Zhuang 1997). Compared with their predecessors, new emigrants show a variety of different characteristics, which include: (1) coming from more diverse regions with diverse backgrounds; (2) continuing trend of polarization of professions, with concentrations in the higher and lower end of social strata; (3) tighter connections between current host society location and China; (4) circularity in their migration pattern, as transportation and communication are more accessible. These changes in composition and behaviors of new emigrants from China also have diversified the image of Chinese immigrants in the destination countries.

The magnitude of the new emigration population expands rapidly in recent decades. In 1982, a number of 56,930 have migrated out of the country, which rocketed to 234,800 in 1990 and to 756,626 in 2000 (Liang and Morooka 2004). The 2010 Chinese census show 1.3 million international migrants whose origins are in China.[2] This is likely to be a very large under-estimate because this census-based number only counts international migrants whose household registration status was suspended.[3] The top three destination countries\regions for Chinese emigrants are North America, Europe and Australia; for instance, the US held 1,808,100 China-born immigrants in total, and China has emerged as the second largest origin country after Mexico (DHS 2012; US Census Bureau 2010).

Family Reunion

After the policy relaxation in 1978, emigration for family reunion reasons immediately gained momentum. In areas of *qiaoxiang*,[4] such as a number of rural areas of Guangdong, Fujian and Zhejiang, people actively sought to migrate out the moment they were permitted to do so. Family reunion thus came into play, especially for those who had family members or relatives overseas. Over time, however, family reunion became a way through which illicit migration was induced using forged documents in those *qiaoxiang*, especially in Fujian and Zhejiang (Li 1999; Pieke et al. 2004). In Guangdong, due to its long history of emigration and large number of overseas Cantonese, family reunion, which is believed to be of the legal type, remains the foremost reason of emigration in this province since 2000 (Liang and Morooka 2004).

Student Migration

Between the 1950s and 1970s, there is limited international student exchange with former Soviet Union. Nixon's visit to China in 1972 signaled a start of scholarly exchange between China and the broader world, primarily the U.S. The first wave of scholars and students sent abroad were mostly older researchers, since young high education graduates at this time were not ready in terms of foreign language and substantive training due to the educational interruption of the Cultural Revolution in the 1950s and 1960s (Orleans 1988). It was after 1978 that long term exchanges of scholars and students were resumed. After more liberal policies were introduced in 1985, and opportunities opened up in destination countries, "study-abroad fever" was fermented (Poston and Luo 2007). The fever has by no means diminished in recent years, and it is further facilitated by an emerging industry of language schools and education agencies tailored for potential students studying abroad (Xiang 2003).

Since the turn of the twenty-first century, and especially after 2008, there has been a boom in the number of students and scholars going abroad, with more than a 24 % increase each year up through 2010 (Report on Students Studying Abroad [RSSA] 2011). Statistics show that as

[2] Data for this are kindly provided by China National Bureau of Statistics (March 2013).

[3] Based on similar definition of emigration in these censuses, these numbers show the extent to which emigration had increased over the past three decades. World Bank (2011) provides an estimate of 8.3 million for the stocks of emigrants from China, which should be closer to the volume of emigrants from China over an extended period.

[4] The ancestral hometowns of overseas Chinese since the nineteenth century. These communities are typically more developed, given the abundant resources coming in form of remittances.

of the end of 2010, the total number of Chinese students who had studied abroad since 1978 reached 1,570,800, with 632,200 of them returned. While North America, Europe and Australia consistently rank as top destinations for Chinese students, developed Asian countries, such as Japan and Korea also receive large number of students from China. In the US, Chinese students have become the largest group of international students (with 22 % of the total international students in 2011), surpassing the number of students from India; in Japan, about two-thirds of the on-campus foreign students in mid 2000s were Chinese (Liu-Farrer 2009; RSSA 2011).

Student composition is evolving well. As to sponsorship, students under government support and self-support occupy a growing percentage, while those under workplace support have declined. The same resource also reports that this age shifting is a result of the expectation of staying in developed countries, as well as shunning the pressure of the college entrance examination in China. Between 2003 and 2010, the government dispatched students rose from around 3,000 to 16,000 each year as well. This is due to new programs that the Chinese government had set up to send large number of exchange students at graduate level, with the primary condition that they would return and stay in China for at least 2 years (Ministry of Education of China 2012).

Their major field of study is no longer concentrated in the area of physical science or engineering. MBA programs, social science and humanity programs are becoming increasingly popular among such students. Taking advantage of the linguistic, cultural and social skills shared by this student-turned-employee group with majors in humanities and social sciences, multinational companies in Japan for instance managed to expand their business in China (Liu-Farrer 2009). It is also worth noting that besides the purpose of receiving quality education, student identity is also exploited as a means to enter developed countries where part time jobs are allowed for students. In Japan, for instance, facilitated by profit-driven language schools, many Chinese labor workers in the 1990s entered the country with student visas (Liu-Farrer 2009).

Clandestine Labor Emigration

Another major path of emigration from China is illicit migration. This form of migration started in the early 1980s, accelerated in the 1990s, and continues a high rate from major sending areas, namely, Fujian, Zhejiang and Northeast China. Leading destinations are U.S. and Europe. Legal and illegal migration interplay in various ways –illicit migrations are usually covered under the name of family reunions, studying abroad or other legal means of entry, which are then accompanied by overstay or illegal working etc. Although emigration of this type generally favors young, risk-taking individuals, emigration of different origins follows disparate trajectories with diverse major destinations.

Emigrants from Fujian and Zhejiang

The year 1993 witnessed the tragedy of the *Golden Venture*, a human cargo ship heading towards the U.S. which ran aground with ten Chinese drowning while trying to swim ashore with desperation. Among those clandestine migrants aboard ship, most were from Fujian Province, a coastal province southeast of China consistently ranked one of the top emigrant sending provinces in China and a major origin of undocumented Chinese immigrants in the US (Liang and Morooka 2004). Amid various routes to get to the United States (over 60 different routes from China to US were identified by US investigators in the early 1990s (Skeldon 1995), these Fujianese immigrants mainly see New York City as the primary destination. From New York, they are disseminated to other areas of the US via ethnic employment agencies and subsequently worked in the booming Chinese takeout and buffet restaurants (Liang and Li 2012). In fact, the Fujianese are replacing the old timers of Cantonese origin who occupied Chinatown in NYC decades ago as the dominating group. Most of the Fujianese immigrants in the US, more specifically, are

from the Fuzhou area, the capital of Fujian, with the major sending counties being Changle, Tingjiang, Mawei and Lianjiang (Chin 1999; Liang and Morooka 2004).

Although the U.S. is the foremost destination, Fujianese are also drawn to Europe and other Asian countries/regions like Japan and Southeast Asia. The migration from Fujian to Japan started in the early 1980s, mostly from towns in Fuqing city, associated with family reunion, studying or work. A student visa was conveniently used to gain entry to Japan to work illegally, though in the mid-1990s when Japan fell into economic recession this stream of emigrants was directed to Europe (Liu-Farrer 2009). Besides Fuqing County, Mingxi County in Fuzhou is another major area sending illicit migrants to Europe. Dispersed in the broad European continent, Fujianese especially prefer Western Europe as the destination and use Central and Eastern Europe as transit countries.

Just north of Fujian, Wenzhou and Qingtian, two areas in Zhejiang Province share a history of emigration to Europe before the establishment of the PRC and nowadays sent the largest number of emigrants to Europe and a high proportion to the U.S. (Li 2002; Pieke et al. 2004; Wang 2000). The Zhejiang people are particularly known as vendors and tailors for products, such as shoes and jackets and their ambition to start new businesses whenever possible. They mostly travel across western and southern Europe in the 1980s, and countries like Italy, Switzerland, Austria, Spain and Portugal all have a visible presence of these migrants; after the early 1990s Eastern Europe also witnessed their immigration and the rapid growth of their small business (Fu 2009). Both Fujian and Zhejiang are the biggest concentration of communities of *qiaoxiang*.

Emigrants from Other Parts of China

The northeastern provinces, namely Liaoning, Jilin and Heilongjiang, as well as Yunnan province near the southwest border, have impressively risen as two other origins of emigration in China since late 1990s. Border trades feature in both regions' migration to their nearby countries – Russia and neighboring southeastern Asia countries. The "shuttlers" –what people call the traders that travel between China and Russia – are those who tap into the undersupplied local markets in the north country, by selling textiles, shoes, hardware or other light industrial products and return with fur, timber, machines and other products (Pieke et al. 2004). Unlike most other cases, some of these traders are well educated and have contacts with state or public owned enterprises and connections in trading networks (Pieke et al. 2004). Illicit migration to other developed Asian countries, Europe and the U.S. also gained considerable momentum due to economic restructuring, which created free labor in urban areas (Xiang 2007).

Recent Trends in Emigration

Upper Middle Class and Super-Rich Emigration

While the rising living standards within the borders have alleviated the pressure for illicit labor migration in recent years, new patterns are emerging. The upper-middle class and the "super-rich" in China are actively looking into opportunities to emigrate. The scale of this emigration is expanding so rapidly that it is deemed as the "third emigration wave" after those in the late 1970s and 1990s (Center for China and Globalization [CCG] 2012). North America, Australia and New Zealand are the top destinations for this group of emigrants.

While academic studies on this group of people are still lacking, a survey conducted in 2009 revealed that among the country's 60,000 super-rich individuals with assets of at least 100 million yuan (1US$ = 6.2 yuan), nearly half of them were considering emigrating overseas; and 14 % of them were in the process or have already emigrated which rose to 27 % in 2011 (China Merchants Bank and Bain & Company [CMBBC] 2011). To the extent that investment, such as purchasing real estate properties, helps gain access to residency, citizenship or the first step getting into the desired destinations, Chinese immigrants are driving real estate booms in

places such as Midtown Manhattan and selected places in Europe (CMBBC 2011; Johnson 2012). While a better education for children, safety of personal wealth and a preparation for retirement are among the top reasons of emigration, it is suspected that the major concern for leaving China has to do with uncertain political and social trajectory in China (CCG 2012; Johnson 2012). What it means for China in face of this magnitude of emigration among the super-rich, in terms of business opportunities, public impacts among many other fields, still remains to be seen. Meanwhile, this emigration is more like a two-way street: emigrants usually travel back and forth and serve as middlemen linking businesses between two countries. Realizing this new pattern of emigration, the Chinese government increasingly emphasizes "weiguo fuwu" (serve the motherland) which has blurred the limits of geography instead of "huiguo fuwu" (return and serve the motherland). Consequently the government has guaranteed this mobility and promoted the circulation of professional elites and entrepreneurs overseas. Due to the large number of transnational professionals, communications and cooperation between Chinese academia and industry with that of other countries have been intensified.

Children of the Wealthy Studying Abroad

The fact that self-sponsored and younger students overseas have been rapidly increasing over the past decade signifies that the wealthy are sending more children out to for the sake of studying. Universities and colleges and even high schools abroad are becoming the main targets of these young students and their parents. In some major cities, such as Beijing and Shanghai, there has been an increase of 20 % in high school students who sipped the Chinese college entrance exam and applied to foreign colleges instead (RSSA 2011). In 2010, this group of high school students reached around 20,000. These students are hardly confined to the traditional student receiving countries, such as the US, England, France, Australia and Japan; they also embrace other developing countries such as Indonesia. This current large outflow of students that involve such a wide array of destinations is unprecedented in Chinese history, and it generates enormous impacts for China and the world. Such influences include the exceptionally large sum of tuitions that flow into those destination countries, as well as other economic and cultural connections built by those students that maintain transnational ties in various ways.

Driving Forces of Emigrants

Local Contexts

One theme that constantly merges in the international migration in China literature is the local economic sociopolitical and cultural context in the origin communities. Economic incentive serves as a powerful force to drive young laborers out. In rural areas of Fuzhou where farming and fishing was used to be the major occupations of local people, the shortage of farmland and depletion of fish directly created the economic need to migrate out in the 1980s (Chin 1999). The dramatic rise of migration from urban areas in the northeastern provinces (with nearly no outmigration history) is more of the outcome of economic restructuring and shifting away from state socialism in heavy industries that used to dominate the region. Massive layoffs and the smashing of "rice iron bowl" due to economic reform in the mid-1990s suddenly liberated laborers with little professional skills (Xiang 2007).

Local cultural change after the first few individuals migrated further fueled the process once emigration started. Whether built on a remembered tradition of emigration or no emigration history, the first wave of emigrants in villages were able to bring ample opportunities and modern lifestyle back to the communities which were later transformed into grandiose housing structures and other symbols. Legends in a foreign land were told in local communities (often with exaggeration) and the quick climbing up of the new rich in local social stratification further inspired more people migrating out. Even those who remain in local villages are proud to have family members abroad, and some in

Fuzhou, for instance, are reported to be obsessed with living in the U.S. (Chin 1999; Li 1999).

Sociopolitical context exerts considerable influence in selectivity of emigrants in China. Most studies in this area have focus on emigration communities in Fujian. Since the early 1990s, it is been found that those undocumented migrants in the U.S. were usually relatively well-off ones (Chin 1999; Kwong 1997); and 10 years later, a survey further confirmed that local cadres with positional power were charged a lower smuggling fee and given easier access to emigration opportunities (Liang et al. 2008a). The role of local government, however, varies across communities. In most areas of Fujian, such as Changle, where human smuggling is illegal, local government strives to eliminate labor migration in this area; while in Mingxi, Fujian, the county authorities regard emigration as an effective way to export labor and build a rising overseas population from this area (Pieke et al. 2004). Due to this difference, the power of local political capital as well as human and social capital in circumventing institutional barriers and facilitating an individual's emigration was seen more in the former than the latter (Lu et al. 2013).

In China, emigration also cannot be separated from the dense fabric of internal migration. Though it seems that internal and international migration networks in Fujian work in separate ways, prior internal migration experience proves to deter international migration of individuals (Liang and Chunyu 2013). Researchers suggest that individuals who are able to participate in business related internal migration are less likely to engage in international migration.

Global Contexts

The foremost overall driver of migration is China's ever-deepening integration into global economy. The small/medium scale businesses that Chinese are engaging in Europe, North America and Africa are determined by the fact that there are a vast number of available inexpensive goods made in China, which are welcomed by the other countries. Border trade, discussed above, is another example of such a global force. Economic communications with other countries also have created a large number of overseas job opportunities for Chinese. For the increasing number of Japanese corporations who started to emphasize the Chinese market, Chinese graduates in Japan who are versed with both cultures and languages are actively recruited by those companies and encouraged to stay (Liu-Farrer 2009). Labor contracts usually arise in regions where the Chinese government has major industrial projects, such as southeastern Asia and Africa, with most of the Chinese being technical staff, factory workers or employed peasants (Zhuang 2000). Ma (2004) estimated that, by 2002, some 520,000 Chinese workers were engaged in labor contracts abroad, and a much larger number is expected in more recent years.

Global impact has also manifested itself in both origin communities and destination countries. The admiration of western lifestyles and quest for freer political environment that promoted continuing emigration from the local community is a product of political and cultural expansion from these countries (Li 2005). As to the destinations, relative scarcity of labor has ensured the employment of the undocumented from China. In Europe, Fujianese moved to new regions or countries of the continent mainly because the business of Chinese restaurant was saturated in the local area (Pieke et al. 2004). Whether it is the same case for the expansion of Chinese restaurants in the U.S. should also be a fascinating research question to explore.

Evolving policies toward undocumented immigrants in destination countries also encouraged emigration to these destinations, such as Europe and the U.S. where policies were implemented over several years to legalize the undocumented (Li 1999). Policies decriminalized and justified the clandestine emigration within the sending communities, and sometimes these behaviors were then considered heroic, a pathway to success, and an experience worthy of showing off (Li 2001). Policies targeting immigrants from China also sometime provide legitimate paths. Immediately after the 1989 Tiananmen Square event, the U.S. and a number of European countries created shortcut

avenues to get permanent resident status. Undocumented immigrants were also seen using claims of being victims of one-child policy or of religious prosecution in the 1990s and early 2000s to gain legal status in destination countries (Li 2001; Liang 2001b).

Networks

The role of networks in initiating and sustaining the trend of international migration has been extensively discussed in the context of China, especially in Fujian where illicit migration remains prominent. Networks usually take forms of kin networks, intermediary agencies and networks in the destinations. In communities with histories of migration, after the policy relaxation, kin networks are usually fully exploited before the use of commercial migration brokerages (usually called snakeheads) expands widely. Ko-lin Chin (1999) interviewed 300 illegal migrants from Fujian who worked in New York and the results show that about 70 % of those illegal Chinese immigrants had relatives who had previously settled in the United States.

In fact, kinship networks and same-village networks are usually inseparable since a village mostly consists of extensive relatives of the same surname. Population religion and ancestor worship play an important role in building transnational ties between the origin village and the migrant populations abroad (Pieke et al. 2004). The kinship/hometown network provides a flow of information back to the place of origin and offers channels through which migration can be achieved in the name of family reunification (Wang 2000). Networks in destinations are also mostly organized along the kinship and native-place sentiments, and townsmen (tongxiang) are crucial part of their networks in these countries. Through this tie, prior undocumented migrants lend money to potential migrants, and provide job-hunting assistance after new migrants reached the destination. A cumulative feedback effect can arise, as discovered by a number of studies in China (e.g. Chin 1999; Liang et al. 2008a, b). Migration grows through a process of networks expansion overseas, with institutional arrangements strengthening and augmenting labor demand from overseas ethnic economies (Pieke et al. 2004).

Migration networks, nevertheless, can be severely deleterious to the emigrants. It has been found in Japan, for instance, that Fujianese were more likely to quit school, overstay their student visa and fall into illegal status afterwards. Compared to immigrants from other parts of China, the Fujianese need extra costs to pay to the smugglers with high interests in order to arrive at Japan, they have closed social circles with limited access to valuable information on better job opportunities. Resources available to Fujian networks are mostly used for sustaining an undocumented status rather than academic advancement, a contrast with migrants from other regions of China (Liu-Farrer 2008).

Local contexts and networks facilitate the out-movement of less educated and undocumented emigrants, who primarily come from rural areas. Intermediary agencies such as smuggling organizations or snakeheads have become increasingly important in facilitating emigration through intensive transnational networks and highly sophisticated techniques (Liu 2005). In contrast, these factors seem to be attenuated for highly skilled emigrants from China, who tend to come from urban areas and rely mostly on human capital, instead of networks.

Emigration and Development

Community Level

Although concerns have been raised regarding migration dependency in the *qiaoxiang*, considerable community development was also observed. Remittances sent from emigrants have raised living standards of family members who remained in China – for instance, it is estimated that the Fuzhou area received more than 200 million dollars per year from the US, and the majority of it was used for supporting families and building housings for the general Fujian area (Li et al. 2003; Liang and Morooka 2008; Zhu 2001). Direct investment is also on the rise. In Mingxi, for example, 54.9 million yuan

were invested in businesses like agricultural development, urban construction and tourism (Li et al. 2003). Local infrastructure construction, charitable works and education are also supported. These, in turn, have created ripple effect on other entrepreneurial activities (Liang and Morooka 2004). With more locals migrating out and bringing perspectives and values back home, the remaining villagers got to broaden their personal horizon and even modify their esthetic values, such as an increasing preference for western style housing builds and home decorations in these emigrant communities (Li et al. 2003).

Regional and National Level

At a broader level, *qiaoxiang* as a whole have been benefited by direct investment from overseas Chinese. Starting in the 1980s, "Chinese multinationals" run by overseas Chinese in Southeast Asia started to drive the economy of provinces such as Fujian and Zhejiang (Wang 1993). In the 1990s, some 80 % of China's direct foreign investment is estimated to have come from overseas Chinese sources (Skeldon 1995). Voluntary associations (shetuan) formed by these groups of overseas Chinese along the line of communal hometowns have further built the links between political leaders both in China and their residing nations (Liu 1998).

Due to the large number of highly educated emigrants, the brain drain discussion in China has been in the center of public discussion for a few decades. Between 1978 and 2009, there were a total of 1,620,700 students and scholars who went outbound to study, and less than one third of them had returned (497,400) (Qiu 2011). However, the trend of returning is increasing dramatically – in 2000, there were 9,100 returnees, 3 years later this number doubled, and in 2006 it doubled again (Bail and Shen 2008). It is been argued that China is experiencing a brain gain instead of a brain drain, though some argue that with such a larger number of international students within its borders, brain circulation might be a better description in contemporary China and the future (Skeldon 2009).

This trend in return migration is a consequence of efforts that national and local governments made to attract returnees as discussed earlier. As a consequence, China is increasingly benefitting from the return of these people. As early as the 1980s, travelling scholars were mostly selected from their work unit (danwei); upon returning, they often assumed more important research and/or administrative positions (Orleans 1988). They have been the carriers of culture and technical "know-how" and have increased the understanding and both formal and informal lines of communications between China and other countries (Orleans 1988).

In the realm of science and technology, particularly, returnees are playing a leading role. One major portal on the Chinese net – Sohu.com was established by Zhang, Chaoyang, a returnee who came back in 1997; the largest searching engine in China Baidu.com was set up by Robin Li who returned the same year from Silicon Valley. The two figures are just two emblems of the multiple engineer-entrepreneurs with a foreign education background. Research institutions and universities have accepted high proportion of returnees as well. It was reported that 54 % of engineering schools research fellows and 77 % of University Rectors of Ministry of Education are returnees who have made essential contributions in engineering, superconductor technologies or gene mapping (Bail and Shen 2008). These returnees have brought in foreign capital and have brought foreign visitors to China (Zweig et al. 2004). A number of returnees of scholars and professionals are transnational in nature, with affiliations in both China and the U.S. and traveling back and forth (Xiang 2005).

Certain concerns have been raised regarding these returnees as well. From the 1990s to 2009, the (overseas) stay rate for China-born Ph.D. recipients in the fields of science and engineering remained the highest among all nationalities 15 years after graduation (Finn 2012). This showcases that there is still brain drain. These professionals still have concerns about the complex guanxi they have to deal with after they

return and to what degree meritocracy would be rewarded in universities and research institutions. Other common reasons cited are relatively low salaries, problems with children's education and spouses' jobs, or possible family separations. By contrast, in the political sphere, many such trainees have short stays abroad and, and a low percentage of formal degree qualification from the overseas universities with most of them concentrated in technocratic posts (Bail and Shen 2008; Zweig et al. 2004). Nevertheless, the trend is clear that the former brain drain is reversing at a faster rate. The reversal will bring about deep influences on various aspects of the Chinese society.

Conclusions and Future Research

This is the best of times for migration studies in China as both internal migration and international migration are on the rise, providing an unparalleled opportunity to study these issues on such a big scale. Migration in China is important because of the size of its migrant population and potential implications for the world. As many China observers watch the Chinese economy became the second largest economy in the world, we need to stress that migration can be seen as an integral part of China's economic success story. In this chapter, we have synthesized recent literature on internal migration and emigration from China. The idea of analyzing both internal and international migration together gives us leverage to see whether similarities and differences for the two processes exist. This exercise is important for theoretical reasons, as many of the existing studies hold important relevance for migration theory. In the concluding section of this chapter, we highlight some findings that emerge from recent studies on migration in China and identify some areas of research that we believe hold high priority in the future.

First and fundamentally, China's migration story addresses the classic migration question of migration and development. Here in both internal migration and emigration from China, China's recent economic development is clearly a catalyst for both types of migrations. China's transition to a market economy dictates that both capital and labor have to be mobile. Economic opportunities ultimately generate demand for workers and the labor force must be mobile to take advantage of these opportunities, either in China or abroad. This manifests differently in the context of internal and international migration. The migration process (both internal and international) attracts individuals at different skill levels. This is clearly exhibited in the case of international migration as highly educated and not-so-highly educated individuals find their way to other countries. In the context of internal migration, most studies have concentrated in the case of low skilled migration to coastal China. However, as some recent studies suggest, internal migration of highly educated Chinese (often called "white collar migration") is quite substantial and has also contributed to China's spectacular economic performance.

Because the relationship between migration and development is a reciprocal relationship, the Chinese case demonstrates abundantly that China's economic development is related to its migration story. In fact, the setup of China's special economic zones in early 1980s and the flowing of large amount of investment from overseas Chinese are other demonstrations of this connection. If the earlier story of success shows the power of capital, the more recent story illustrates the power of knowledge as many western educated Chinese scholars and engineers contribute to China's development in science and technology, higher educational institutions, and diffusion of innovative ideas. The modern technology of communication and transportation only makes this process take place in much easier and more creative ways than earlier migration researchers had imagined.

Second, the Chinese case also demonstrates the influence of economic globalization on migration patterns. Nothing is more transparent than the case of millions of migrant workers working in coastal China's factories that produce and provide goods for global markets. In an interconnected world, the well-being of these workers

is linked to the health of the global market. Thus, the model of analyzing migrant well-being by looking at their own individual level characteristics or factory level characteristics is clearly not sufficient. As Chinese leaders and leaders of western countries have reached the consensus that the next stage of China's development must focus on generating demand from China, there is, at least temporarily, a sense of uncertainty about the well-being of Chinese migrant workers.

Third, the Chinese case also presents some challenges for migration theories that are often developed in free market societies. As we show in this chapter, some of the migration theories work very well in the context of China, such as migration networks, economic development and migration, human capital theory of migration, and theory of migration selectivity. However, the story of China's floating population suggests that migration theory needs to pay more attention to China's unique institutional context. Thus any migration theory that explains the behavior of China's floating population must specify the extent to which individual's *hukou* (household registration status) is related to the migration process as well as the adaptation process in migrant destinations.[5]

In conclusion, we identify some areas of migration research that promise to be important in the years to come in the context of China. We begin with the topic of migrant children. This includes both migrant children in destination areas and migrant children left behind in rural areas. We believe this topic is extremely important for China's three decades of migration that have affected the next generation of migrants in fundamental ways. Understanding this group of migrant children has strong implications for the future of China.

Another topic that deserves more attention is the group of highly educated and highly successful individuals. There are two stories embedded in this topic. The first story is how this group of highly educated Chinese immigrants contributes to China's economic development and perhaps benefits from it in that process as well. This is a difficult topic to study as systematic data collection of highly educated immigrants requires a high level of coordination and perhaps even different methodology. The second story derives from recently highly publicized reports of emigration of upper class or wealthy Chinese. This is another story that is somewhat at variance with conventional as migration theory would predict; typically upper class people do not emigrate. Migration researchers need to go beyond newspaper headlines to examine the driving forces behind this recent trend of emigration from China.

Another promising area of research is the promotion of a comparative approach of migration studies. The comparative approach could mean the study of both internal and international migration. Most existing studies have focused either on internal migration or international migration. As international migration becomes more and more a practical option for an increasingly large segment of the population in China, China presents another opportunity to examine both processes simultaneously. The comparative approach also means that we study the process of international migration to different locations such as the U.S. and Europe (as in the case of Lu et al. (2013). China has some unique characteristics that many other countries do not have. For example, China shares borders with many countries and sends international migrants to nearly all parts of the world. A comparative

[5] Some (i.e. Roberts 1997) sees similarities between China's floating population and undocumented immigrants in the United States. Although we too see some similarities between the two groups (i.e. lower salary than local population), but in our view the two groups are also qualitatively different. First, there is fundamentally major legal distinction, undocumented immigrants face the danger of deportation any time, but China's floating population clearly have the freedom to go anywhere they want. Second, there is not so much language barriers for the floating population as in the case for undocumented Mexican immigrants in the US. This means China's floating population has the potential to be integrated into much broader occupation areas. Third, undocumented migrants in the U.S. are entirely dominated by low skilled workers, but China's floating population shows quite big variation in educational profile.

study of the migration and adaptation process of Chinese immigrants in these countries would no doubt make a major contribution to the migration field in the twenty-first century. Another area in comparative study of migration is to study minority migration in China and compare it to the case of minority migration in other countries, such as the case of African American migration from the US South to the North.

Finally, as China becomes the second largest economy in the world, it also is becoming a country of destination for international migrants. The most prominent example is the case of African merchants in Guangzhou. This is a classic example to illustrate that investment in a country builds more human connections, and international migration will follow (Massey et al. 1994; Sassen 1990). Of course there are now many more countries that send international migrants (short term or long term) to China. The good news is that the Chinese government already has taken initial steps as reflected in the inclusion of information on foreigners in China in the 2010 Chinese population census. Obviously this is a field we still have very little systematic knowledge. That also means that this is a gold mine that we believe is waiting for many migration researchers to explore in the years to come.

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Changing Patterns of Migration in India: A Perspective on Urban Exclusion

15

Amitabh Kundu and Lopamudra Ray Saraswati

Introduction

Much of the development literature abounds in references characterizing migrants as impoverished people in distress forced out of rural livelihoods by economic and social compulsions, absorbed into slums as squatters, manifesting a host of social, civic, and health problems. A segment of the migrants is associated with political and development linked displacement at the region of origin. They do not have resources for basic civic amenities and pay little municipal taxes that put a heavy burden on the finances of the receiving states and cities (Piel 1997; Satterthwaite 2008; UN Habitat 2008). They are also often seen to be associated with the problems of law and order, outbreak of epidemics etc. and posited as a threat to local and national security (Ellerman 2003; Ooi and Phua 2007). A negative perspective has, thus, been projected which implicitly endorses the standpoint that slowing down the migration would be desirable not only for the wellbeing of the population receiving them but for the migrants as well. Even the researchers and administrators who take a pro-migrant standpoint and fight for their access to basic services and equal rights with the local population, generally concede that the best option for the migrants would be if their economic and social conditions can be improved at the place of their origin, eliminating thereby their need to migrate.

The development process in many countries in Asia, India being no exception, seems to have resulted in accentuation of spatial inequalities, measured in terms of per capita income, consumption expenditure and several other developmental indicators, across rural areas, small towns and metro cities. The interstate inequality in the country, too, has been going up, not withstanding an upsurge in income growth at macro level in recent years. It is nonetheless argued within the neoclassical framework that the window of migration will provide an opportunity to the labour in backward rural areas to shift to growing regions and dynamic urban centres. The relevant question would, therefore, be: given the strong negative perspective on migration, how the stresses and strains in the labour market would impact on its mobility. More specifically, one would like to know if the unemployed and disguised employed in backward states, striving below or around the poverty line, particularly those in rural areas, would be able to move to dynamic urban centres and improve their socio-economic status.

Several global institutions have hypothesized that the less developed countries can reshape their economic geography by organising movement of labourforce from backward regions to select urban

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_15

agglomerations to achieve higher levels of economic efficiency.[1] It would be interesting to test this proposition and examine if there is an association between the adoption of the measures of globalization, high economic growth and acceleration in migration within the country towards its developed regions and large cities.

In the context of this broad macro concern, the present paper begins by reviewing the policies and programmes at the national and regional levels in countries of South and East Asia, to determine if these are responsible for slowing down of migration and ushering in an era of exclusionary urbanization. This has been done in the second section, which follows the present introduction. The next section analyses the trends and pattern of internal migration in India, considering the gender, rural urban locations and durations of migration, using the information from Population Census and National Sample Survey (NSS) since the early 1970s.[2] Given the conflicting trends emerging through usage of different concepts and data sources, an attempt is made to understand the statistical discrepancies and difficulties in drawing unambiguous inferences. The fourth section analyses the socio-economic characteristics of the migrants and labour mobility through cross tabulation of migrant men in the working age group, into various migration streams and attempts to identify the factors behind migration and their impact. Select social and economic characteristics of adult male migrants have been analysed in a comparative framework with their non-migrant counterpart in the next section. The final section summarises the findings and puts forward a perspective for ushering in a strategy of balanced regional development in the country.

Policies and Programmes Pertaining to Migration and Their Impact

The programmes for intervention in labour mobility by South and East Asian countries including China can broadly be classified into two categories: (i) Interventions for stabilization of agrarian economy, checking rural-urban (RU) migration and promoting a few globally linked cities through provision of high quality infrastructure, and (ii) Welfare schemes for urban migrant workers and their families to bring them into mainstream.

Stabilization of Regional Economies and Promoting Globally Linked Cities

As per the United Nations study (2000), 44 % of the world's countries, of which 88 % are in the less developed regions, consider their settlement pattern to be a matter of national concern. Faced with the problems of metropolis-based growth, these countries have tried to disseminate infrastructure and basic facilities into rural areas and promote development there. Understandably, settlement policies have become synonymous with measures to reduce or reverse RU migration through balanced regional development.

China, for example, has launched measures for employment generation and industrial dispersal in rural areas with the objective of reducing rural-urban inequality within the framework of a 'socialist market economy'. This is accompanied by pro-rural reforms in the taxation system that had earlier favoured the large cities (Riskin 2007). These are helping to slow down migration from the villages. Reuters (2005), Kahn (2005), Chan and Buckingham (2008), etc. argue that there is a good deal of rhetoric in the reforms aimed at abolishing the *hukou* institution, and that it continues to be the major factor preventing China's rural population from settling down in cities. In a way, they confirm the postulate of Wang (2005) that *hukou system* stands 'adapted and adjusted', but is very much 'alive and well' as a part of reality in China, which maintains rural–urban 'apartheid'.

Vietnam, too, has an elaborate and complex system of controlling migration into big cities through migration policies and household registration system (*Ho Khau*), despite economic renovations (*Doi Moi*) launched officially in 1986, abolishing much of this system (Dang

[1] World Bank (2009).

[2] Migration data from 2011 Census are yet to be available.

1999). India, while not implementing direct controls on population movement, has a number of policies for rural development which are expected to slow down migration. The National Rural Employment Guarantee Scheme, which promises 100 days of wage employment in unskilled work for every rural household is a major new initiative at the country level, and is expected to check rural out-migration. Similar policies and institutional actions have been proposed by the Government of the People's Republic of Bangladesh (2003) in its 'National Strategy for Economic Growth, Poverty Reduction and Social Development'. It delineates programmes to reach out to the poor and remote rural areas that are vulnerable to adverse ecological processes, through micro-credit and other programmes, a few of these being promoted through Grameen Bank.

The Philippines has the longest history of decentralization measures in East Asia with the introduction of the Local Government Code in 1991. It launched the Medium-Term Philippine Development Plan 2001–2004, thereby encouraging the location of industries and large educational facilities at a distance of 50 km or more from metro Manila. Indonesia, which does not have a formal scheme for regulating population mobility, announced a big bang decentralization policy in 1999 to restrict RU migration by redirecting workers to rural areas or provinces that have labour shortages (Munir 2002). The national government of Thailand has adopted a two-track strategy of local self-sufficiency and selective global engagement to stall exodus from rural areas. Malaysia reports decentralization of industrial areas, opening up of new development corridors, including a 270 km^2 multimedia super corridor, and setting up of a new capital city. Mongolia launched a programme in 2001 devolving all government functions to the city (*kota*) and district levels, with the objective of developing growth centres as an alternative to Ulaan Bataar (Kundu and Kundu 2012).

The second component of the strategy is to promote global cities with high quality infrastructure and, at the same time, contain their demographic growth through the *development of satellite towns*. Several of the South and East Asian countries are attempting to build quality infrastructure in their big cities and connect these with global markets for attracting international capital. The state and city governments are trying to attract national and multinational companies by simplifying the legal and administrative procedures for resource mobilization in capital markets, in addition to opening up their land market. They also take a pro migration stance as they would like to attract skilled manpower from within the country and abroad to ensure global competitiveness. The objective is also to create a peaceful, multi-cultural and conflict free social environment through the absorption of the migrant population in a decent physical setting.

Despite this positive and liberal perspective on migration, the state institutions have often gone in for 'sanitization drives', pushing out 'low valued' activities, including slum colonies, from the city core to the peripheries. A strong lobby has emerged in these cities for letting the the local governments function relatively independently of state and central level controls and create quality space for global companies and their staff. Decentralization of planning responsibilities, sought under the UN-Habitat perspective, is also helping the lobby, resulting in the privatization of many civic services and withdrawal of public subsidies, thereby hiking their prices. All these have helped socio-economic absorption of better-off migrants into the cities, while restricting the entry of those not employed by the companies and not having affordability for the market based delivery system. The poor migrants have often been forced to seek absorption in peripheries of these cities.

Webster (2004) underlines the importance of peripheral development around metro cities for understanding urbanization in less developed countries. He argues that peri-urban areas have experienced rapid economic growth as these can more easily absorb the migrants and provide space for new manufacturing structures. In addition, large segments of the existing poor, living in urban cores, are being pushed to the periphery by land market forces or drawn there by emerging employment opportunities. More

importantly, informal activities along with other pollutant industries are also being shifted out to the 'degenerated periphery' (Kundu 2007). Most of the less developed countries in Asia can be seen channelizing investments and attracting global funds into their mega cities and national capital and at the same time discouraging in-migration of rural poor to these, through direct controls, and provision of incentives and subsidies in their backward regions.

The *Global Report on Human Settlements* suggests that 'beautification' projects, immediately prior to global summits or mega sport and cultural events, are common justifications for slum clearance programmes (UNCHS 1996) in large cities. The examples of China and India may be cited as illustrations. China has seen fast growth of 'urbanizing villages' (Song et al. 2007) in and around its global cities for the 2006 Olympic Games. Migrants are allowed to stay in these settlements for the simple economic reason that they are a source of cheap labour. However, when their utility is over, they are systematically evicted. Similar is the modus operandi of the projects in India for the Commonwealth Games 2010 and related infrastructure development. In Indonesia, cleaning up the city of Jakarta and reducing its population growth have been taken up as a national goal, and the government is desperately trying to promote reverse migration. All these measures have decelerated the demographic growth in metropolitan cities despite significant improvements in the quality of their infrastructure, resulting in a decline in the overall rate of urbanization in many of these countries (Kundu and Kundu 2012).

Welfare Programmes for Migrant Families

Many governments in Asia have launched programmes at the state and local levels to improve the general micro-environment in slums and squatter settlements. Civil society organizations and human right activists, have also occasionally succeeded in forcing the government to provide basic amenities in these settlements by invoking the intervention of the judiciary. Many of these programmes require the migrants to meet certain requirements that are considered important from the perspective of law and order or health and hygiene in the cities. The requirements of formal documents, system of police verification, procedures of their registration etc. often act as impediments in their absorption. Ironically, a system designed to provide decent livelihood, access to amenities and to protect the migrants against discrimination often end up creating barriers in their becoming a part of the formal system, resulting in exclusion.

Westendoff (2008) holds that the state in China would never allow large-scale formal RU migration in order to avoid pressure on urban infrastructure and the social security system, despite the decline in agricultural employment that tends to push up the floating population. In India, the evicted squatters, pavement dwellers, hawkers etc. whose land is taken over for certain projects, mostly do not end up getting plots or flats, even when there are provisions for that. Furthermore, those who are allotted plots are mostly not in a position to hold on to these due to their acute short-term exigencies, growing land values, and relaxed legal and administrative environment. In India, a massive infrastructure development mission has been launched in 2006 in 65 large cities, named Jawaharlal Nehru National Urban Renewal Mission, that have created space for commercial activities and residential and recreational complexes for urban upper and middle class, often through eviction of slums and low income colonies. These have also led to deceleration of in-migration into these cities, as noted through the latest data from Population census of 2011 (Kundu 2012a, b).

The resource availability for the welfare programmes and their spatial coverage has declined in recent years under the new systems of governance that stipulate reduction of subsidies to social sectors in most of the countries. Withdrawal of the state and local governments from these sectors and their becoming increasingly dependent on capital markets have affected their capacity to extend services to the poor. Economic downturn of the 1990s and the more recent one during 2008–2009 have

understandably weakened government commitment to these policies. Concerns of affordability, cost recovery, and participation of resident associations in better-off areas have been responsible for ushering in a process of elite capture. This has enabled upper- and middle-income households to corner a large chunk of the resources made available by national and international agencies that were meant for the poor.

There has been an avowed concern for the socio-economic upliftment of workers in the unorganized sector that absorbs the migrants in most countries, and yet nothing concrete has happened in terms of programmatic interventions. The lukewarm response of the private sector for providing social security or basic amenities, too, has contributed to the dilution of the pro-poor and pro-migrant thrust in public-private participatory programmes. Civil society organizations have of late become active in stopping illegal encroachment of public spaces, including parks, pavements, and so on, through public interest litigations. The judiciary too, is increasingly upholding the rights of 'formal citizens' (Kundu 2004). All these have led to pushing poor migrants either into marginal lands within the city or to degenerated peripheries, as noted above, resulting in increasing disparity in the quality of micro-environments, segmentation of urban space, and reduction in the percentage of poor in urban areas.

The synoptic overview of migration-urbanization linked policies in various countries of south-east Asia makes it clear that these would have a significant impact in deceleration of urban growth. This has been responsible for the downward revision of the projected urban populations by the UN agencies for future years. It is stipulated that a similar policy perspective has emerged in India inhibiting the flow of RU migration and decelerating urbanization. It would, therefore, be useful to examine the macro pattern of migration and urbanization in India in some detail, determine their various components and identify the causal factors. A detailed examination of migrants' characteristics will also be useful in understanding the dynamics of urbanization and migration in the country. These have been attempted in the following sections.

Trends and Patterns of Migration in India: A Macro Overview

Like in the global literature, in India too, migrants are characterized as poor and distressed people living in slums without basic civic amenities, and often forced into illegal and immoral business. Many researchers, while sympathizing with their pitiable conditions often associate them with outbreak of epidemics, HIV/AIDS and problems of law and order that in turn have been considered a threat to local and national security (Ratho et al. 2005; Deering et al. 2008; Saggurti et al. 2009, 2012; Sharma 2006; Yadav 2004; Devnath and Roy 2013). Hence, like other South and East Asian countries, slowing down of migration is being endorsed even in India for the benefit of both migrants and the receiving society. The present section probes into these issues by analyzing the socio-economic characteristics of the migrants and their employment pattern within a comparative framework with their non-migrant counterpart and attempts to assess their implications.

The analysis is based on the data coming from two major national institutions – the only sources that provide temporally and cross sectionally comparable information for the country as a whole and across regions: (i) Census of India, and (ii) National Sample Survey Office (NSSO). Census identifies the migrants in two ways – (i) migrants by place of birth (PoB Migrant): one whose place of birth is different from the current place of enumeration, and (ii) migrants by place of last residence (PoLR Migrant): one whose last residence is different from the current place of residence or of enumeration. However, information by the second criterion was not collected in 1961 census. All subsequent Censuses provide information for both the categories of migrants. The migration data from the latest Census, conducted in the year 2011, however, is yet to be released. NSSO collects information on migration details of individuals in the migration focussed household surveys and provides unit-level data so as to enable classification by their socio-economic background. It defines a migrant

Table 15.1 Internal migrants classified by gender as per population census 1961–2001

	Percentage to total population					Migrants in millions
	1961	1971	1981	1991	2001	2001
Total migrants						
Total migrants (PoLR)		29.1	30.3	26.9	30.1	309.4
Inter-state migrants (PoLR)		3.4	3.5	3.2	3.7	41.2
Inter-censal migrants (PoLR)		12.4	12.2	9.7	9.5	97.6
Inter-censal inter-state migrants (PoLR)		1.7	1.6	1.3	1.5	16.8
Total life-time migrants (PoB)	30.8	28.7	29.4	26.5	29.3	301
Inter-state life-time migrants (PoB)	3.3	3.4	3.6	3.3	3.8	42.3
Male migrants						
Total migrants (PoLR)		17.5	17.2	14.7	17	90.7
Inter-state migrants (PoLR)		3.4	3.3	2.7	3.4	19.1
Inter-censal migrants (PoLR)		9.4	8.9	6.1	6.1	32.5
Inter-censal inter-state migrants (PoLR)		1.8	1.6	1.2	1.5	8.5
Total life-time migrants (PoB)	18.5	17.2	16.6	13.8	16.4	87.2
Inter-state life-time migrants (PoB)	3.6	3.4	3.3	2.8	3.5	19.7
Female migrants						
Total migrants (PoLR)		41.7	44.3	40.8	44.1	218.7
Inter-state migrants (PoLR)		3.5	3.8	3.7	4.1	22.1
Inter-censal migrants (PoLR)		15.7	15.7	13.5	13.1	65
Inter-censal inter-state migrants (PoLR)		1.6	1.7	1.5	1.6	8.3
Total life-time migrants (PoB)	43.9	41.1	43.1	40.3	43.1	213.7
Inter-state life-time migrants (PoB)	3.2	3.4	3.9	3.8	4.2	22.7

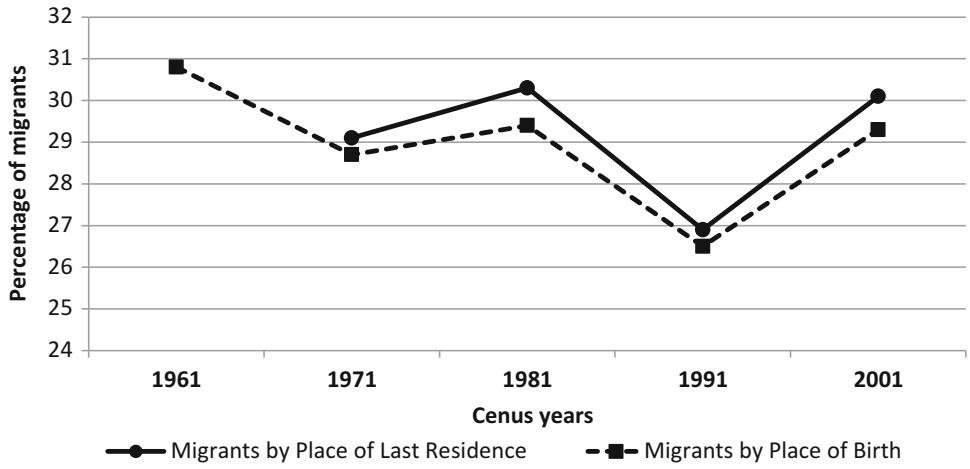
Source: Migration tables (D-series), CENSUS of India (1961–2001)
Note: PoLR and PoB imply the place of last residence and place of birth respectively. The figures of inter-state migrants for 2001 are computed by making adjustments for the newly created states of Jharkhand, Chhattisgarh and Uttarakhand. No other adjustment for reorganisation of states has been possible in the Table

as a person whose last usual place of residence, anytime in the past, was different from the place of enumeration. All the tables prepared from the NSS data are based on this definition. Much of the analysis in the present chapter is based on the two rounds of its survey – one conducted during 1999–2000 (55th round) and the other during 2007–2008 (64th round).

The percentage of migrants by their place of birth (PoB), also referred to as life-time migrants, can be noted to have gone down from 30.8 % in 1961 to 29.3 % in 2001, which give no basis to hold that Indians have become more mobile over time (Table 15.1 and Graph 15.1). It must be noted that the figure has gone up during the 1990s after coming down to the lowest level of 26.5 % in 1991. The percentage of migrants has declined for the males from 18.5 to 16.4 during 1961–2001 while that for women can be taken to have remained stable at around 43 %. A similar declining trend is observed in respect of total inter-state PoB migrants during 1961–1991 among men with no clear trend being observed in case of women.[3] However, the percentage figures have gone up for both during 1991–2001.

The trend appears somewhat different for migrants by place of last residence (PoLR), particularly because of the absence of the figures

[3] The figures for 2001 have been reworked out after making adjustments for the three newly formed states. The migrants from (a) Jharkhand to Bihar, (b) Bihar to Jharkhand, (c) Uttar Pradesh to Uttarakhand, (d) Uttarakhand to Uttar Pradesh, (e) Madhya Pradesh to Chhattisgarh and (f) Chhattisgarh to Madhya Pradesh have been subtracted from the total interstate migrants in 2001 to make the data comparable with those of previous Censuses. No adjustment has been made for the data for 1961 which would imply underestimation of the inter-state migrants in that year as there was reorganization of states in 1966 resulting in carving out the state of Haryana.



Graph 15.1 Trend in the percentage of internal migrants in the total population of India, 1961–2001 (Source: Migration tables (D-series), Census of India 1961–2001)

for 1961, as this information was not collected in that Census. For males, a secular decline is noted in case of total, inter-state, intercensal and interstate-intercensal migrants during 1971–1991. A corresponding decline is noted for women as well although not for all Census years and all the four categories. However, the percentage figures generally record an increase during 1991–2001 for both men and women.

The data from NSS over the past three decades for which comparable data are available (Table 15.2 and Graph 15.2) confirm a similar trend. The share of migrants for men (i.e. percentage of male migrants in the total male population) has declined from 7.2 % in 1983 to 5.4 % in 2007–2008 in rural areas, the corresponding urban figures being 27.0 and 25.9. The declining trend has been noted as striking during the recent period from 1999–2000 to 2007–2008 as well, in case of rural areas. However, in urban areas, the figures have remained about the same. A slight decline is noted in case of the percentage of male migrants at all India level from 11.9 to 10.9 during this period. Importantly, the respective percentages for women migrants are significantly higher than those of males in both rural and urban areas, primarily because of female resettlement in the village of the husband as per the societal norms. The trend for the percentage of women migrants, however, sharply contrasts with that of the men as the former shows a secular increase both in rural and urban areas,[4] the figure going up from 42.2 in 1999–2000 to 47.2 in 2007–2008 at the all India level (see Table 15.2 for rural-urban disaggregated figure). Understandably, this has resulted in a significant decrease in sex ratio, defined as the ratio of males to females, in the areas receiving the migrants.[5]

It is indeed true that there has been marginal increase in internal mobility since the 1990s, particularly in urban areas, which can partly be attributed to factors linked with globalization and changing family composition of migrants.[6] And yet, the percentage of migrants in 2001 works out to be less than that in 1961 and 1971 for men, as

[4] NSSO (2001, 2010).

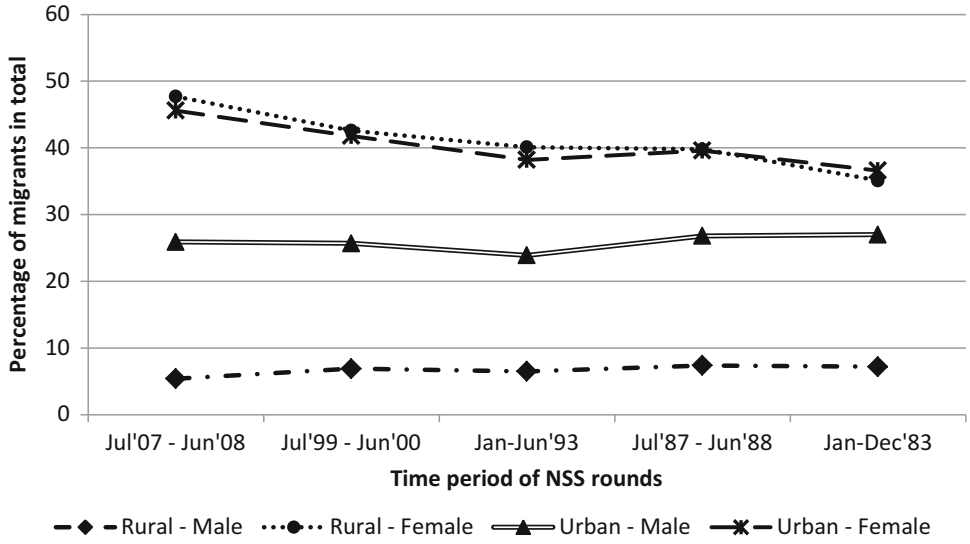
[5] The urban centres, particularly large cities that historically had a very high sex ratio (male-to-female ratio), have recorded massive decrease in their sex ratio in the last couple of decades as may be seen in the General Population Tables in the Census.

[6] Many of the illegal migrants from neighbouring countries being recorded as interstate migrants could also explain the rising migration trend in the 1990s (Kundu and Saraswati 2012).

Table 15.2 Percentage of internal migrants to total population in rural and urban areas as per different NSS rounds

	Rural		Urban	
Round (year)	Male	Female	Male	Female
64th (July, 2007–June, 2008)	5.4	47.7	25.9	45.6
55th (July, 1999–June, 2000)	6.9	42.6	25.7	41.8
49th (January–June, 1993)	6.5	40.1	23.9	38.2
43rd (July, 1987–June, 1988)	7.4	39.8	26.8	39.6
38th (January–December, 1983)	7.2	35.1	27.0	36.6

Source: Various NSS reports on migration



Graph 15.2 Percentage of male and female migrants in different NSS rounds in rural and urban India (Source: Various reports from NSS)

per the Census data. The data from NSS for the period from 1983 to 1999–2000, too, confirm this declining trend of migration, both in rural and urban areas, although the fall is less than that reported in the Census.

The share of interstate migrants, which is often referred to as long distance migration, has increased among the migrants as also in total population, as may be inferred from the rise in the percentage of lifetime interstate migrants (Table 15.1). It has been mentioned above that these figures have been made comparable after making adjustments in the migration data for the emergence of three new states, by combining these with the states from where they have been culled out.[7] As per NSS, the percentage of interstate migrants to total population has gone up from 2.8 in 1999–2000 to 3.1 in 2007–2008.[8] The interstate migrants are generally economically better off, work largely in non-agricultural sectors and have a higher incidence of regular

[7] Further, interstate migration can be noted to be going up for the people whose place of origin is urban, and it has happened due to people moving from one urban centre to another (percentage of urban-to-urban interstate migrants increased from 8.8 in 1999–2000 to 11.0 in 2007–2008; whereas the corresponding figures for urban-to-rural interstate migrants are 7.6 and 7.4).

[8] NSSO (2010).

Table 15.3 Percentage distribution of internal migrants by streams

	All migrants		Adult male migrants	
Migration streams	1999–2000	2007–2008	1999–2000	2007–2008
Rural-rural	61.7	61.7	30.2	24.4
Urban-rural	6.5	5.7	10.6	8.6
Rural- urban	18.9	19.5	36.5	41.6
Urban-urban	12.9	13.1	22.7	25.5
Total	**100**	**100**	**100**	**100**
Per cent of total migrants in population (rural)	24.3	26.1	9.0	6.5
Per cent of total migrants in population (urban)	33.3	35.4	32.0	31.4

Source: Computed from unit level data of 55th (1999–2000) and 64th (2007–2008) rounds of NSS

employment, compared to the migrants moving within a state or a district. A substantial segment of the former would come from relatively high socio-economic strata and is a part of the organised labour market. An increase in the share of interstate migrants can, therefore, be taken as reflecting sectoral shift from agriculture to industry, from casual to regular employment and from low consumption expenditure category to a higher category. This consequently implies an improvement in the quality of labourforce in the migration stream.

Migration Pattern of Adult Men and Employment Structure Before and After Migration

The adult males in the age group of 15–59 years are often considered to constitute the core of the migration stream as the overall labour mobility is linked to them. It is important that the proportion of *adult male migrants* among the corresponding urban population has gone down even more sharply than the *total male* migrants (Table 15.3). From the above structural shifts in migration stream, one would infer that family migration has increased in recent years. Perhaps previous migrants are now able to bring their family members to join them. It can also be attributed to the adult males now moving with wives, children and elderly persons, which would bring down the share of adult men among the migrants.

Considering the different streams of migration, one would note that the combined share of Rural-Urban (RU) and Rural-Rural (RR) in the adult male migration streams has gone down marginally from 66.7 % in 1999–2000 to 66.0 % in 2007–2008 which can be attributed to fall in the share of RR migrants being larger than the increase in that of RU migrants, as shown in Table 15.3. The share of those going out of urban centres – Urban-Rural (UR) and Urban-Urban (UU) – has, however, gone up. Correspondingly, the percentage of (adult male) migrants coming into rural areas to the total rural population has gone down from 9.0 % to 6.5 % during this period. The shrinkage of rural areas due to settlements getting reclassified as urban cannot fully account for this decline. The figure for urban areas too records a decline from 32.0 % to 31.4 %.

The increase in the share of UU stream is consistent with the trends, since mobility due to business, training, transfer and joining new jobs, with a high component of inter-state migration has gone up. Understandably, the persons in this stream are likely to be in a higher socio-economic bracket compared to their counterpart in RR and RU streams, despite some improvement even in the later categories in recent years. All these, in a way question the perspective that the migrants are economically and socially backward and have a status much below that of the non-migrants. There has been distinct improvement in the social and economic status of migrants as one would infer from the changing composition of the migrants in recent years.

The percentage distribution of adult (age group 15–59) male migrants classified by the reasons of mobility further confirms this proposition (Table 15.4). The share of persons coming in search of employment or better employment has

Table 15.4 Percentage distribution of adult male migrants by reasons of migration

Reasons of migration	1999–2000			2007–2008		
	Rural	Urban	Total	Rural	Urban	Total
In search of employment/better employment	22.3	38.9	32.0	18.5	37.0	30.8
Other employment/business related reasons	17.4	21.9	20.1	18.6	27.2	24.3
Studies	3.1	6.0	4.8	7.8	6.8	7.2
Social/political problem	3.8	1.2	2.3	2.2	0.5	1.0
Other reasons	53.4	32.0	40.8	52.9	28.5	36.6
All adult male migrants	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

declined from 22.3 to 18.5 % in rural areas during the period 1999–2007. The corresponding figures for urban centres are 38.9 and 37.0. One may argue that economic desperation as a factor of mobility is becoming less important over time. On the other hand, "other employment and business related factors" that induce mobility among better off sections of population have gained in importance, particularly in case of urban areas. Furthermore, the share of migrants due to social and political factors has gone down while that attributed to education has gone up, as further investigated in the following section.

The detailed categorization of attributes of male migrants in 15–59 age groups before and after migration provides important insights into the process and factors responsible for their mobility. Table 15.5 (bottom half) shows that the percentages of regular workers among the migrants before their migration is about 19 %, as high as that of self employed or casual workers at both the time points (column 6 and 11). One would infer that there is a substantial section of migrants who have regular employment and yet they are shifting to other places in search of better employment. The high percentage of persons not in labourforce – ranging from 31 to 37 among the rural out migrants – RU and RR streams – in 15–59 age group may be taken as a positive factor since this implies many of them are moving as a students or as a part of the family that have the capacity to take them along. Young adults – neither in nor seeking employment – joining the economic migrants in the family, in a certain sense, reflects the financial strength of the latter. However, these streams have low percentages of regular workers of about 11 % (col. 2, 4, 7 and 9), much less than the average out-migrants from rural areas, implying that these migrants are economically weaker than the others. Furthermore, while the shares of unemployed in different migration streams vary between 3 and 10 %, in case of RU migrants, it is as high as 14 % in 1999–2000 and 19 % in 2007–2008. The share of non-workers (persons not in labourforce), works out to be about 35 % in different migration streams. This implies that a high proportion of young adults are migrating either for education or are able to join their families. Importantly, many of them get absorbed in the labourforce after or without completing their education, resulting in a significant decline in the share of non-workers among the migrants, reported in the upper half of the table. It may further be noted that this share was below the average in the UR stream –only 28 % were non-workers in 1999–2000 – but this has gone up to 34 % in 2007–2008. This implies family migration among those coming or returning to rural areas from urban centres has gone up in recent years.

The upper half of the Table 15.5 shows the employment status after migration by different streams for the adult males. From this, one would infer that the migration decisions impact significantly and positively on the livelihood pattern. It is noteworthy that the percentage of regular workers among the migrants at the place of destination is as high as 40 %. The figure for RU migrants is even higher than that, at about 45 %, at both the time points, going up from a mere 11 %, reported before migration, as discussed

Table 15.5 Percentage distribution of adult male migrants in different streams as per their current employment status and that before migration

Usual principal activity status	1999–2000					2007–2008				
	Migration streams					Migration stream				
	Rural-rural	Urban-rural	Rural-urban	Urban-urban	Total	Rural-rural	Urban-rural	Rural-urban	Urban-urban	Total
Current status										
Self-employed	32.9	33.7	26.1	22.4	**28.1**	31.2	32.3	27.2	23.4	**27.6**
Regular employee	21.1	26.2	44.7	52.2	**37.3**	21	25.8	45.2	53.3	**39.7**
Casual labour	31.8	23.5	13.7	6.4	**18.6**	31.1	16.2	13.1	4.9	**15.7**
Unemployed	1.7	5.5	1.9	3.1	**2.5**	1.6	2.6	1.7	2.3	**1.9**
Not in labourforce	12.5	11.1	13.5	15.9	**13.5**	15.1	23.1	12.9	16.1	**15.1**
Total internal male migrants aged 15-59	100	100	100	100	**100**	100	100	100	100	**100**
Status before migration										
Self-employed	20.3	12.7	21.6	13.1	**18.3**	20.4	13.6	20.9	14.8	**18.6**
Regular employee	11.6	31.6	11.9	36.2	**19.4**	10.2	29.1	10.7	34.4	**18.2**
Casual labour	29.2	23.6	15.7	6.6	**18.5**	28.0	20.6	18.2	4.9	**17.4**
Unemployed	5.3	3.8	14.2	7.6	**8.9**	6.4	2.8	19.1	9.9	**12.2**
Not in labourforce	33.6	28.4	36.6	36.4	**34.8**	35.0	33.9	31.1	36.1	**33.5**
Total internal male migrants aged 15–59	100	100	100	100	**100**	100	100	100	100	**100**

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

above. The percentage of persons not in labourforce declines from about 34 before migration to 15 after migration. This is mostly likely because many found better livelihood prospects at the destination. Similarly, the percentage of unemployed goes down from about 10 to 2 %, as a result of migration. Moreover, the percentage of unemployed among RU migrants which was much higher than in other streams before migration, works out to be less than 2 % after migration, the lowest among the streams. Understandably, many of the unemployed as also non-workers join the workforce as self employed at the destination. All these results suggest that the adult males are able to improve their economic condition through their migration decision. There is no evidence of strong distress factors behind RU migrants, driving them out of their place of origin or their remaining underprivileged in the labour market after the migration.

Migration from urban centres to rural or to urban areas can be taken as reflecting mobility at the higher stratum of socio-economic hierarchy. About one third of the UR and UU migrants were already in regular employment before migration at both the time points (col. 3, 5, 8 and 10 in the bottom half of Table 15.5). The percentage of unemployed among the UR outmigrants in 1999–2000 was less than 4 % and this has gone down to less than 3 % in 2007–2008. Correspondingly, the percentage share of non workers among them has gone up from 28 to 34. This reflects an improvement in the quality of UR migrants. The increased mobility of adult males from one to another urban centre, as reflected by the increase in the share UU migrants (Table 15.3) among total migrants can, however, be attributed to unemployment in small towns and the youths seeking better prospects through migration, possibly to larger

cities. One notes that the percentage of unemployed in this UU stream decreases from about 10 % before migration (lower panel) to 2 % after migration (upper panel) which is comparable to the figures for other streams. Whereas the share of regular workers among UU migrants hovers around 35 % before migration, it has gone up to about 53 % after they migrated, in both the years, the highest among the streams, after migration. The figure is higher than even that of the non-migrant population, as computed from the unit level data. One would infer that many of the UU migrants take the migration decision after being offered or being aware of the possibility of getting a regular employment.

Table 15.6 gives the shift of the adult male migrants across activity categories through migration. About a third of these migrants were non-workers before migration at both time points, as observed through the unit level data (Table 15.5). Importantly, about 33 % of these people remained outside labourforce even after migration in 1999–2000, the figure for 2007–2008 is 41 % (col. 6 and 12). This confirms that the proportion of adult males moving along with the family for non-economic reasons like education, training etc. has increased in recent years. This possibly reflects higher incidence of migration for attendance in educational institutions, undergoing training or waiting for better future prospects, in recent years.

The probability of getting regular employment after migration is about 80 % for those in regular employment before migration in both time periods. The most impressive shift is in case of unemployed – the probability of their getting a regular job after migration is 60 %. However, among those who were self employed and non-workers, only a quarter land up with a regular job at the destination. It is important that these percentage figures have not changed between 1999 and 2007. The only change seems to be for casual workers for whom the percentage of people getting regular employment after migration was 16 % in 1999–2000 which has gone up to 25 % in 2007–2008. All these directly or indirectly suggest improvement in the quality of adult migrants in recent years. These also question the proposition that migration takes place among the weakest and most vulnerable section of the labourforce.

Social and Economic Characteristics of Adult Male Migrants in a Comparative Framework

An analysis of the socio-economic status of the adult male migrants in comparison with that of non-migrants would be important in identifying the factors behind their migration decisions as also the impact on their wellbeing. It is evident from the differential educational attainments of the migrants vis-à-vis the non-migrants in Table 15.7 that the former enjoy a higher social status compared to the non-migrants. The percentage of illiterates among these migrants in rural areas was about 25 %, compared to nearly 35 % among the non-migrants in 1999–2000. The two percentage figures have declined to 20 and 25, reflecting an overall increase in literacy. A similar pattern is noted in urban areas as well. Conversely, the share of persons having higher secondary and graduate level of education among adult male migrants was higher than among non-migrants in 1999–2000 both in rural and urban areas. What is more important, however, is that the figures have gone up much more sharply for the migrants than non-migrants during the eight year span between the two surveys.

The distribution of adult male migrants and non-migrants by their household (per capita) expenditure brings out the difference in their economic wellbeing quite sharply. One can see that the percentages of migrants in the bottom six expenditure categories are much less than the corresponding figures for non-migrants, both in rural and urban areas (Table 15.8). This occurs at both the time points under consideration. The aggregate figures for these six categories in rural areas works out to be 43 and 68 % for the migrants and non-migrants respectively while these for urban areas are 13 and 29 in 2007–2008. The shares in the top two categories, on the other hand, are more than twice that of the non-migrants both in 1999–2000 and 2007–2008. Furthermore, average per capita

Table 15.6 Percentage distribution of adult male migrants as per their current employment status and that before migration

	Usual principal activity status before migration											
Current usual principal activity status	1999–2000						2007–2008					
	Self-employed	Regular employee	Casual labour	Un-employed	Not in labourforce	Total	Self-employed	Regular employee	Casual labour	Un-employed	Not in labourforce	Total
Self-employed	64.6	12.2	20.8	20.5	24.5	**28.4**	64.7	11.9	20.9	24.6	21.0	**27.9**
Regular employee	23.4	79.5	16.1	60.7	25.4	**37.0**	24.3	81.6	24.9	58.2	25.3	**39.4**
Casual labour	9.1	3.2	59.6	12.8	12.1	**18.6**	8.6	2.3	52.5	12.8	9.1	**15.7**
Unemployed	0.4	1.1	0.7	3.6	5.1	**2.5**	0.4	1.1	0.3	2.9	3.9	**2.0**
Not in labourforce	2.5	3.9	2.8	2.4	33.0	**13.5**	2.0	3.2	1.4	1.4	40.7	**15.0**
Total male migrants (15–59)	100.0	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	**100.0**

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

Table 15.7 Percentage distribution of adult male migrants and non-migrants as per their educational status

	1999–2000			2007–2008		
	Migrant	Non-migrant	Total	Migrant	Non-migrant	Total
Rural						
Illiterate	25.5	34.8	34.0	20.2	25.2	24.9
Below primary	12.2	12.4	12.4	9.5	10.6	10.5
Primary	31.9	33.1	33.0	33.6	39.7	39.3
Secondary	15.1	11.2	11.5	13.9	13.3	13.3
Higher secondary	7.7	5.3	5.5	14	7.5	7.9
Graduate or above	7.6	3.2	3.6	8.7	3.8	4.1
Total	100	100	100	100	100	100
Urban						
Illiterate	11.8	13.8	13.2	9.5	10.3	10.1
Below primary	8.3	7.8	8	6.1	6.1	6.1
Primary	27.7	33	31.3	27.8	32.4	30.9
Secondary	19.8	19.2	19.4	17.9	19.1	18.7
Higher secondary	12.9	11.8	12.1	17.1	15.7	16.2
Graduate or above	19.5	14.4	16	21.7	16.3	18
Total	100	100	100	100	100	100

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

household expenditures in all the quartile groups for the migrants are higher than the corresponding non-migrant figures (Table 15.9) which reconfirms the proposition that migrants are economically better-off than the non-migrants. More significantly, the average expenditure figures for the migrants have gone up at a much higher rate than that of the non-migrants at current prices, as may be inferred from the rates of change. All these clearly indicate that the migrants are not merely at a much higher level of economic wellbeing at both the time points but also that their economic conditions have improved rapidly during the period. This holds for both rural and urban areas.

It would, however, be erroneous to conclude from the above that migration is the only factor which explains the present difference in economic wellbeing between migrants and non-migrants. Kundu and Sarangi (2007) have demonstrated that economic gains of migration are higher in large cities[9] compared to lower order cities/towns. Further, education or skill emerges as the most important factor in reducing the risk of a person falling below poverty line, both for migrant and non-migrant population. Understandably, the better off sections of population with higher levels of capabilities find it easier to get absorbed in urban economies – particularly large cities – and avail the "opportunity" offered through migration. This is in keeping with the literature on migration determinants, which indicates that those with higher levels of human capital can often achieve appreciable returns on that through migration. The poor and unskilled male labourers (seeking absorption in informal activities as casual workers), on the other hand, find it increasingly

[9] A major limitation confronting this exercise is the sampling design of NSS which is supposed to be appropriate for generating estimates of consumption expenditure and poverty only at the state and (NSS) region level. Recent publications of NSS point out that as a result of inadequate sample size (largely due to difficulties in increasing the field staff), the estimates have had high standard errors and consequently low reliability, in a large number of states. It is difficult to overcome this limitation unless the sample size is increased. Without that, the identification of the factors explaining the incidence of poverty for different size class of urban centres at the state level would have problems of reliability. These would, however, be less vulnerable to sample size and report lower standard error if obtained only at the national level. Keeping this in view, the present paper analyses the variations in the incidence of poverty and for different size class of towns only at the national level.

Table 15.8 Percentage distribution of adult male migrants and non-migrants across their household monthly per capita expenditure (MPCE) categories

1999–2000				2007–2008			
MPCE (household) decile class for all India	Percentage distribution by MPCE class			MPCE (household) decile class for all India	Percentage distribution by MPCE class		
	Migrants	Non-migrants	All		Migrants	Non-migrants	All
Rural							
Less/equal 246	6.2	10.5	10.1	Less/equal 378	6.0	10.6	10.3
246–294	6.3	11.0	10.5	378–451	5.8	11.5	11.1
294–335	7.6	11.2	10.9	451–511	7.0	11.4	11.1
335–376	8.1	11.5	11.2	511–573	7.1	11.6	11.3
376–421	9.2	11.2	11.0	573–642	8.9	11.7	11.6
421–477	9.6	11.4	11.2	642–727	8.3	11.4	11.2
477–549	10.2	10.4	10.4	727–849	10.0	11.1	11.0
549–659	12.9	9.8	10.1	849–1040	12.1	9.8	10.0
659–885	14.0	8.3	8.8	1040–1446	15.8	7.6	8.1
More than 885	15.9	4.7	5.7	More than 1446	19.1	3.2	4.3
Total	100.0	100.0	100.0	Total	100.0	100.0	100.0
Urban							
Less/equal 246	1.1	2.5	2.1	Less/equal 378	0.7	2.3	1.8
246–294	1.3	3.8	3.0	378–451	1.0	2.8	2.2
294–335	1.9	4.8	3.9	451–511	1.4	4.3	3.4
335–376	2.8	5.7	4.8	511–573	2.1	4.9	4.1
376–421	3.2	6.9	5.7	573–642	3.3	6.5	5.5
421–477	5.5	8.6	7.6	642–727	4.4	8.2	7.0
477–549	8.4	10.8	10.0	727–849	6.6	11.1	9.7
549–659	11.7	13.7	13.1	849–1040	11.9	14.1	13.4
659–885	20.5	18.2	18.9	1040–1446	21.8	19.2	20.0
More than 885	43.6	25.0	31.0	More than 1446	46.9	26.5	32.9
Total	100.0	100.0	100.0	Total	100.0	100.0	100.0

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

difficult to become a part of the process and avail the benefits in urban setting. Understandably, their migration rate has gone down which is reflected in a significant decline in the percentage of poor in metropolitan and class I cities during the last decade and a half. They are able to get a foothold in small and medium towns but here the opportunities of employment and poverty alleviation are low, as noted above. Consequently, migration for poverty alleviation has become a less visible component in the mobility stream and it is likely to become even smaller over time.

One additional factor that may help produce these trends deserves discussion. The decline in the percentage of adult male migrants and their economic and social status being better and improving faster than the corresponding non-migrants may be partly attributable to barriers in mobility for the poor. In addition to the rigidities in the agrarian system, growing regionalism, changes in skill requirements in urban labour market etc., there is no doubt that the system of governance in the cities has become hostile to newcomers (Kundu 2013). These have made migration process selective wherein poor and unskilled labourers are finding it difficult to access the employment opportunities. A major factor responsible for the low poverty and high socio-economic status of migrants is the difficulty

Table 15.9 Average expenditure (in rupees) in each MPCE quartile class by migration status and place of residence for adult males

	1999–2000		2007–2008		Rate of change during this period	
	Migrant	Non-migrant	Migrant	Non-migrant	Migrant	Non-migrant
Rural						
First quartile	283.58	249.51	443.90	380.95	57	53
Second quartile	425.30	353.21	675.95	532.50	59	51
Third quartile	595.88	459.17	1002.52	685.56	68	49
Fourth quartile	1171.17	767.19	2668.92	1139.19	128	48
All	**618.79**	**456.49**	**1197.01**	**684.51**	**93**	**50**
Urban						
First quartile	426.60	336.50	705.99	535.11	65	59
Second quartile	678.72	513.47	1151.69	824.03	70	60
Third quartile	971.96	724.75	1675.56	1201.41	72	66
Fourth quartile	1812.80	1427.49	3546.36	2392.02	96	68
All	**972.25**	**750.23**	**1769.53**	**1238.12**	**82**	**65**

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

encountered by the poor to move into urban centres, especially the metropolises.

Two other demographic changes further support the proposition that there has been distinct improvement in the socio-economic status of the migrants in recent years. The percentage of persons in 15–19 age group is less for the migrants compared to the non-migrants, in rural and urban areas. This is understandable as the adolescents continue to be a small proportion of the migrant population, despite an increased family movement in recent years (Table 15.10). What is interesting that both the figures have gone down over the years (with a corresponding increase in the figures for the next higher age group), suggesting that the average age of the adult migrants has gone up.[10] This should be considered a welcome trend as a segment among them are attending educational institutions staying at home rather than being forced out in search of employment, as confirmed by growth in enrolment. It is possible to attribute this also to decline in the proportion of new migrants in the migration stock. Assuming that the age distribution in the migration stream has remained unchanged, the decline in the rate of migration will increase the average age due to the aging of the earlier migrants.

A larger percentage of married persons among the adult male migrants in relation to that of non-migrants in urban areas is due to a large majority of the former coming from rural areas where the age at marriage is less than in urban areas. This can also be attributed to, at least partly, to the burden of a family becoming a factor in migration for the married adult males. Happily, this figure has gone down during 1999–2007 which suggests that the choice element in migration decision is playing a more important role rather than family compulsions of the yesteryears (Table 15.11). Unmarried persons shifting places for education or employment would be considered a more desirable trend than that of married persons, from the viewpoint of the families and the society as a whole.

Population Mobility and Urbanisation: A Macro Overview

Population figures from the Census of 2011 have come into public domain for the states, districts and large urban centres. Unfortunately, it would take a few years before the migration data are released by the Office of the Registrar General, responsible for the Census operations. It is,

[10] A corresponding decline among non-migrants for the same reason but a sharper decline among non-migrants is likely due to decline in India's birth rate.

Table 15.10 Percentage distribution of migrants and non-migrants by 5-year age-groups for adult males

	1999–2000			2007–2008		
Age-groups	Migrant	Non-migrant	All	Migrant	Non-migrant	All
Rural						
15–19	12.4	18.6	18.1	11.3	18.4	18.0
20–24	11.0	14.4	14.1	14.9	13.7	13.8
25–29	12.6	13.8	13.7	12.3	12.7	12.6
30–34	13.1	12.0	12.1	12.9	11.9	12.0
35–39	13.4	11.9	12.0	13.2	11.6	11.7
40–44	13.0	9.3	9.6	10.2	9.8	9.8
45–49	9.7	8.4	8.5	11.1	9.3	9.4
50–54	8.8	6.6	6.8	7.6	6.8	6.8
55–59	6.0	5.1	5.2	6.3	5.9	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Urban						
15–19	11.7	20.6	17.7	11.0	18.1	15.9
20–24	13.3	16.4	15.4	14.4	16.3	15.7
25–29	13.6	13.7	13.7	15.2	13.3	13.9
30–34	12.6	11.8	12.0	13.0	11.6	12.1
35–39	13.7	11.0	11.9	12.5	11.0	11.5
40–44	12.2	9.5	10.4	10.9	9.3	9.8
45–49	9.9	7.5	8.3	10.0	8.3	8.9
50–54	7.5	5.6	6.3	7.6	6.7	7.0
55–59	5.4	3.9	4.4	5.5	5.3	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

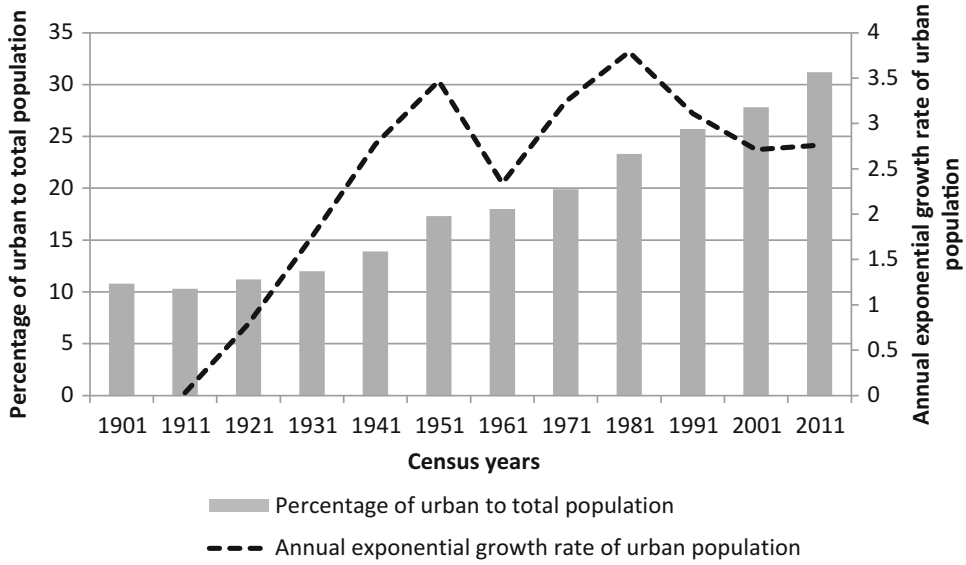
Table 15.11 Percentage distribution of migrants and non-migrants by marital status for adult males

	1999–2000			2007–2008		
Marital status	Migrant	Non-migrant	All	Migrant	Non-migrant	All
Rural						
Never married	23.7	30.3	29.7	27.8	31.7	31.5
Currently married	74.1	67.6	68.1	69.5	66.5	66.7
Widowed	1.9	1.8	1.8	2.3	1.5	1.5
Divorced/separated	0.2	0.3	0.3	0.4	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Urban						
Never married	27.9	41.5	37.2	30.6	40.4	37.3
Currently married	70.9	57.2	61.6	68.4	58.2	61.4
Widowed	1.1	1.0	1.0	0.9	1.1	1.1
Divorced/separated	0.1	0.2	0.2	0.1	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Unit level data from 55th (1999–2000) and 64th (2007–2008) rounds of NSS

however, possible to derive certain inferences regarding the volume and structure of migration occurring during the decade 2001–2011 from the population data.

The share of urban to total population has gone up moderately during the past century, the percentage figure going up from 11 in 1901 to 17 in 1951 and then to 31 in 2011. Urban population has recorded an annual growth rate (exponential) of 3.83 % in the 1970s which came down to 3.09 % in the 1980s and further to 2.73 % in the 1990s and this is associated with a decline in the rate of RU migration, as discussed above. The growth rate seems to have stabilised thereafter as



Graph 15.3 Growth in the share of urban population in India during 1901–2011 (Source: Census of India 1901–2011)

the figure during 2001–2011 works out as 2.76 % (Graph 15.3). This made policy makers at national and state levels concerned about deceleration or stabilization of RU migration and urban growth. This has been considered as alarming, particularly during the periods of globalization and rapid economic growth which had accentuated rural urban (RU) disparity in economic and social spheres. The Eleventh Five Year Plan (2007–2012) and the Approach Paper to the Twelfth Plan (2012–2017) have taken note of the problem and underlined the need for promoting spatially balanced urbanization (GoI 2008, 2011).

The growth rates of rural and urban population from the 2011 Census has unfortunately created an avoidable confusion and controversy. The absolute increase in urban population being higher than that of rural population, the first time after 1911–1921, and urban growth rate increasing marginally during 2001–2011 compared to the preceding decade, on the face of fall in natural growth, have given rise to the speculation that RU migration has picked up. Scholars have rushed to the conclusion[11] that there has been exodus from rural areas due to poverty and social deprivation. The emotional appeal of this thesis of distress migration is so very strong that not many have analysed the changes in other components contributing to incremental urban population besides migration, such as expansion of urban area and emergence of new urban centres. The percentage distribution of the incremental urban population across the four components (Table 15.12) clearly indicates that there has been no increasing trend for the migration factor over the years. However, the urban growth rate remaining stable and significant increase in the number of new towns, clearly reveal that migration is not the factor for infinitesimal increase in urban growth rate during 2001–2011.

Based on the unit level data of the 66th round of National Sample Survey (NSS), one would compute the percentage of urban population in the year 2009–2010 as 26.3 % against the figure of 25.4 % in 1990–2000, obtained from the 55th Round. The NSS figures (projected for the nearest Census year) are always less than that given by the Census basically because the former do not include the population of new Census towns. These, nonetheless take into account increase in population due to natural factors,

[11] Sainath (2011).

Table 15.12 Decomposition of incremental urban population over the decades

	1961–1971	1971–1981	1981–1991	1991–2001
Total increase in urban population (million)	**30.18**	**49.9**	**57.7**	**67.7**
Percentage distribution across various components of urban growth				
Natural increase	64.6	51.3	61.3	59.4
Population of new towns or less declassified towns	13.8	14.8	9.4	6.2
Increase due to expansion in urban areas and merging of towns	2.9	14.2	7.6	13.0
Net migration	18.7	19.6	21.7	21.0

migration and new statutory urban centres that are brought to the notice of NSSO, before designing of the sample frame. The urban percentage of 27.7 as per Census 2001, thus, works out as higher than the NSS figure of 1999–2000, by 2.3 percentage points. Using these proportions, one would expect the urban percentage in 2011 to be higher than that of 2009–2010 by 2–3 percentage points only and not 4.4 points. Extrapolating based on the NSS data, one would compute the percentage of urban population in 2011 as 28.9. The growth rate of urban population during 2001–2011 would then work out as 2.13 %, much below that of the nineties, suggesting a deceleration in the rate of migration.[12]

The proposition of a decline in RU migration has received empirical backing from the population figures of select metro cities and the union territories that are predominantly urban, released by the 2011 Census. Most of the million plus cities have recorded significant decline in their population growth suggesting that they have become less welcoming to the migrants. The growth rate of population in class I cities (having population over 100,000) has also declined from 2.96 % during 1981–1991 to 2.76 % in the 1991–1901 to 2.45 % in 2001–2011. Furthermore, the percentage of adult male migrants in urban areas has declined from 32 % in 1999–2000 to 31 % in 2007–2008. A process of 'sanitization and formalization' seems to be discouraging inflow of rural poor into these cities, resulting in exclusionary urban growth. This is reflected in the decline in the share of migrants moving due to economic compulsions among the RU migrants from the data from the 45th and 64th rounds of NSS.

The impetus to urban growth in the recent decade has come at the lowest level of urban hierarchy. There has been no acceleration in the growth rate of population in small, medium and large towns and cities but the number of Census towns has gone up phenomenally. The total number of urban agglomerations and other cities and towns had increased sluggishly, at a rate much slower than urban population, over the ten decades of the last century. The number had gone up only by 2541 only. In case the units belonging to urban agglomerations are counted as separate units, the increase may be taken as 3334. However, the number of units has gone up during 2001–2011 by 2774, just in one decade. Census 2011 reveals that the annual growth rate of urban population during 2001–2011 could be maintained at the level of the previous decade – at 2.75 % – due to the very high contribution made by the small urban centres. Interestingly, there was no exceptional increase in population growth rate or workforce outside agriculture in these towns but only their number went up significantly. That means Census has declared many settlements, previously declared rural, as new urban centres in 2011. This phenomenon is in contrast with the previous urbanization trend which showed a deceleration in urban growth over the past two decades till 2001. The departure from the past trend is being attributed to Census activism. The Registrar General's office has been under tremendous academic and administrative pressure to review its methodology for identifying the urban centres. Faced with that, the Directorates of Census Operations becoming a

[12] Kundu (2012a, b).

bit more pro-active in identifying new towns is understandable.[13]

The general conclusion thus emerges unmistakably that mobility of men, particularly adult men, which is often linked to the strategy of seeking livelihood (women's mobility getting affected by a host of socio-cultural factors in South Asia), has gone down systematically over the past few decades. It has become increasingly difficult for the poor in deprived rural regions to shift to urban centres in pursuit of survival or for improving their economic conditions. The low rate of RU migration can also be attributed to increased provisioning of basic amenities based on market affordability resulting in hike in user charges and inhospitable social environment in the cities and towns. These factors are important for females as well, although family/marriage linked migration always accounts for a large part of their mobility.

A Perspective for Future Urban Strategy

Stability or decline in the rate of migration, despite continued regional imbalance and improvement in transport and communication facilities in the country, should be a matter of concern. Scholars have tried to explain this in terms of growing assertion of regional identity, education in regional languages up to high school, and land use restrictions operationalised through city Master Plans etc. Taken together these developments serve to discourage migration directly or indirectly. It is argued in the present chapter that these changing requirements in urban labour market and city governance could shift the environment in a less hospitable direction (for the rural poor) and result in less in-migration. The recent trends in migration, thus, seriously discount the proposition that the mobility of labour in the unconstrained market would ensure optimal distribution of economic activities and people in space.

In a fast globalizing economy like that of India, new employment opportunities are coming up in select sectors and in a few regions/urban centres. While the poor constitute a large proportion of migrants, most of these jobs coming up in modern sectors linked to the process of globalization, are being taken by people belonging to the middle and high income categories. It would, therefore, be erroneous to generalize that migrants are destitutes or economically and socially displaced persons, moving from place to place as a part of their survival strategy. To the contrary, young, educated men and women in the upper and middle class are following new economic opportunities; the possibility of the rural poor being absorbed here has become less and less over time.

The low incidence of poverty and deceleration of rural to urban migration in recent decades, particularly in large cities, despite increase in spatial inequality confirms to the fact that absorption of the poor is becoming increasingly difficult over the years. The propositions of spatially unbalanced growth through "dispersal of concentrations" and then reaching out to the poor through a human settlement strategy, as advocated by global banking cum development agencies (World Bank 2009), therefore, needs to be examined with empirical rigour. Migration becoming an instrument of sharing the benefits of uneven growth across states and districts needs to be questioned in the context of increasing social and economic costs of migration which the conventional models fail to incorporate or

[13] The new towns generally account for 5–6 % of the urban population. In the absence of any change in definitional parameters of urban centres and the employment structure evolving smoothly, one can hold that the average size of these towns would remain about the same. The fact that the increase in the number of towns in 2011 is six times that of the previous Censuses would then imply about a sixfold increase in the contribution of these towns. By deducting the estimated population of new towns both from the 2001 and 2011 urban population, the growth rate of urban population in the present decade would be significantly less than the previous one. Alternately, if one assumes that the share of the new towns in urban population has remained unchanged, their average size would be very small now. This would imply that the Census of 2011 has identified new urban centres that are of much smaller denomination than in the earlier Censuses, strengthening the thesis of Census activism.

highlight. Migration has of late become a mechanism for uplifting economic wellbeing largely for the well-to-do people. Selective migration is taking place in a skill linked urban labour market.

Researchers and policy makers have regretted the fact that India has one of the most top heavy urban structures globally, with 23.7 % of its urban population in cities with population over five million, against the global average of 16 % and the European figure being 7 %. There are, on the other hand, a large number of small and medium towns that are languishing for want of an economic base and experiencing low or negative growth. Policy documents emphasize the need and potentiality of more than 20,000 villages, each with over 5,000 people, acquiring urban status. The additional crop of 2774 towns during 2001–2011, as noted above, may largely be attributed to Census being liberal in identifying the new towns. However, a few among these have been identified as "census towns", partly due to workforce here shifting from farm to non-farm employment. In any case, the central and state governments must recognize the possibility of urban impetus coming from the lower level by according "statutory towns" status to the new census towns. They must also design a scheme similar to Jawaharlal Nehru National Urban Renewal Mission[14] to strengthen their infrastructure base and promote them as centres of distributed and inclusive growth. This would necessitate revisiting the investment and sectoral scenarios projected for urban economy for the Twelfth Plan, based on the model of top heavy urbanization of the High Powered Expert Committee.[15] It is only through this that the migration pattern can be diversified and oriented towards small and medium towns and the desired rural urban transition can be achieved.

[14] GoI (2012).

[15] NIUA (2011).

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Migration in Australia and New Zealand

16

Graeme Hugo, Janet Wall, and Margaret Young

Introduction

There are few countries whose populations are more influenced by migration, both international and internal, than Australia and New Zealand. Not only are around half of their current residents foreign-born or the child of an immigrant, but they also both have substantial diasporas and they change their usual place of residence more frequently than in most other countries. This high mobility adds an important element of dynamism to the characteristics and distributions of their populations. Both countries are high income economies[1] and have indigenous populations that were quickly outnumbered by waves of European, mainly British, colonists beginning in the late eighteenth century. However, these longstanding characterisations as 'European outposts' on the fringe of the vast Asia-Pacific region are changing with a strengthening of their migration (and other) relationships with that region.

Although individual nation states with quite separate and distinct policies, Australia and New Zealand have had shared values with respect to international migration and their policies have followed, for the most part, similar paths. In addition they share a location on the south eastern edge of Asia and the south western edge of the Pacific. Moreover they enjoy a special bilateral international migration relationship which allows more or less free movement between the two nations so that New Zealand is a predominant destination and origin for emigrants from and immigrants to Australia and the reverse is true for Australia (Hugo 2004a). It has been argued in fact that for many purposes Australia and New Zealand constitute a single labour market. This is reflected in the fact that New Zealand immigrants in Australia more closely resemble Australian internal migrants than they do the immigrant population from other countries (Hugo 2004b).

This chapter begins by analysing the main features of contemporary international migration in the two countries. This is followed by a discussion of the major international migration issues which they face together as well as separately. It is interesting that while in both countries there has been increasing intensity of mobility with the Asia-Pacific region, New Zealand's focus has been more strongly on the Pacific while Australia has a stronger Asian orientation.

[1] GNI per capita (formerly GNP per capita), World Bank Atlas method in US$ in 2010 for Australia was 45,850 and New Zealand, 29,140.

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_16

Some Data Issues

Few countries in the world have been as influenced by migration as Australia and New Zealand. Figure 16.1 shows that both countries figure prominently in the contemporary world with the largest numbers of immigrants and with high rates of permanent migration. In both countries half the population was either born in a foreign country or has a parent who was born overseas. Moreover both countries figure among the world's major countries of emigration (United Nations 2011). New Zealand is unique in the OECD having the highest per capita rate of both immigration and emigration.

Australia and New Zealand have excellent international migration information with respect to both stock and flow information. The main source of stock data are the quinquennial population censuses, which contain a series of questions which relate to the overseas-born population of the nations and their descendants. The main source of flow data is derived from arrival and departure cards completed by all people entering and leaving Australia and New Zealand. The key point here is that both countries collect information on all people leaving the country as well as those arriving so they are among the very few countries that can accurately establish the scale and composition of emigration as well as immigration. Moreover the isolated island geography

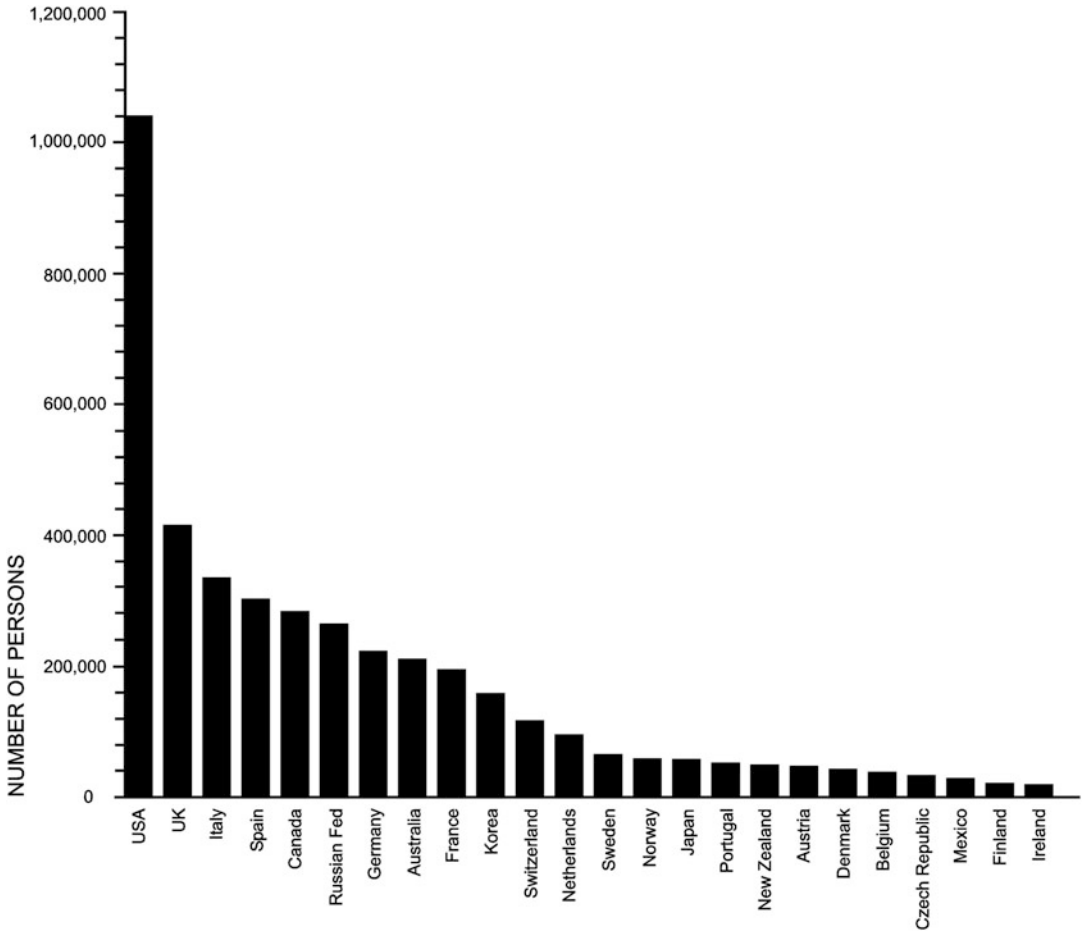

Fig. 16.1 Permanent-type inflows, standardised statistics, 2010 (Number per thousand persons in the population) (Source: OECD 2012, 29)

of both countries means that they are able to control migration more easily than if there was a land border so levels of clandestine migration are extremely small.[2] Both countries also have national longitudinal surveys of settler arrivals which investigate among other things the labour market adjustment of recent settlers.

Australia and New Zealand international migration flow, in addition to its high level of completeness and accuracy has two particular characteristics which separate it from most national migration data systems and which enables them to analyse key elements of contemporary global migration.

- Firstly, by collecting emigration as well as immigration data it is possible to analyse flows both into and out of the country. Ley and Kobayashi (2005) have criticised standard international migration data and research for studying only the settlement end of the migration process and ignoring the origin and processes and impacts.
- Secondly, by collecting information on all movement, not just that involving more or less permanent settlement, insights can be gained into temporary, circular and seasonal migration as well as permanent settlement.

As well as this flow information, Australia and New Zealand have highly accurate, complete count population censuses each 5 years[3] which collect comprehensive stock information on the immigrant population. The censuses include questions on birthplace, birthplace of parents, ethnicity, religion, length of residence, ability to speak English and language spoken at home. Australia and New Zealand also have included internal migration questions in the quinquennial census. These include questions on place of residence one and 5 years ago. Also, the census asks for usual place of residence so that people temporarily absent on the night of the census can be assigned to their usual residence. The Australia and New Zealand censuses ask all questions of the total population so international and internal migration data are available down to the smallest geographical scale.

The Demographic and Economic Context

Australia's population in mid 2012 was 22,683,600 representing 0.32 % of the global population and is currently (2011–2012) growing at a rate of 1.6 % per annum – greater than the rate of global population growth and one of the fastest among OECD nations. Of the annual population growth of 359,640 persons, some 57.9 % was attributable to net migration gain (ABS 2012). New Zealand is significantly smaller with a population of 4,433,100 in 2012 and is growing at 0.6 % per annum. Net migration is negative and in 2012 it was −11.4 %.

The recent (2011) rates of economic growth were 2.0 % and 1.4 % for Australia and New Zealand respectively and they, especially Australia, have thus far escaped some of the worst effects of the Global Financial Crisis. Australia has experienced an extended period of economic growth since the recession of 1990–1991. In recent years the mining boom fuelled by the industrial expansion of China has been an important element. However the tightening of the labour market is also partly a function of ageing of the population. Unemployment rates in September 2012 were 5.3 in Australia and 7.3 in New Zealand.

Ageing of the workforce will not be as great in Australia and New Zealand as in many OECD nations and it will come somewhat later. This is due to the profound effect of the baby boom on Australia's demography. In Australia baby boomers make up 25.4 % of the adult population and 27.1 % in New Zealand. As they move into the retirement ages, the low fertility of their children means that without migration, exits

[2] Although in both countries there are problems with overstayers who remain beyond their visa's eligibility date and others who enter as tourists but defy the conditions of their visas and work.

[3] The 2011 enumeration in New Zealand was postponed because of the devastating Christchurch earthquake which occurred in the week before the planned census.

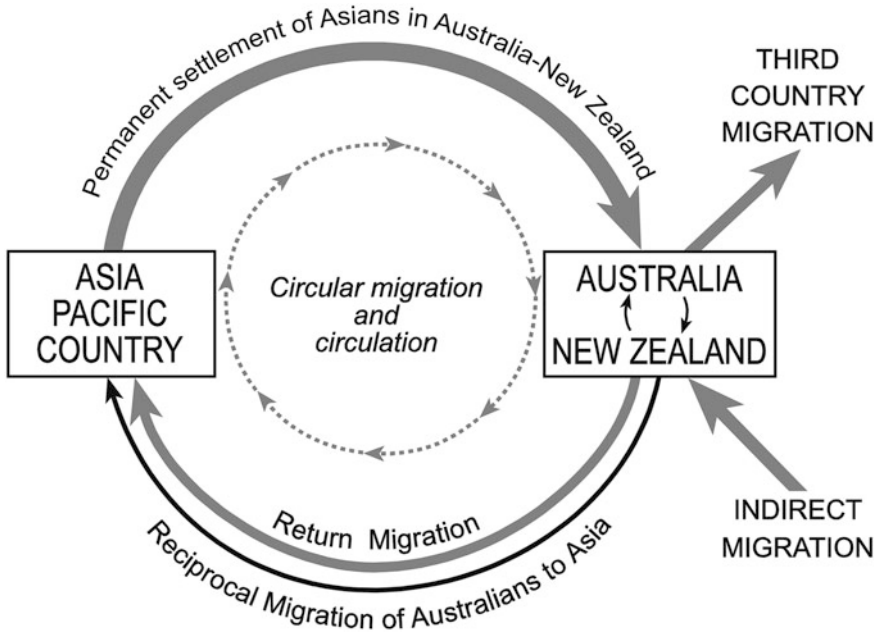

Fig. 16.2 A model of the Australia-New Zealand/Asia-Pacific Migration System

from the workforce will begin to outnumber entrants in the 2020s and there will be a deterioration in the ratio of working ages to dependent ages.

Conceptualising Australian-New Zealand International Migration

Australia and New Zealand are conventionally seen as 'traditional immigration nations' (Castles and Miller 2009) with more than a century of planned immigration, much of it from Europe. Yet this conceptualisation of them as 'destination countries' is part of what Ley and Kobayashi (2005) refer to as misplaced emphasis on a settlement and assimilation paradigm in international migration. However, the comprehensiveness and high quality of Australia-New Zealand international migration flow data allow us to quantify the level of international movement, both permanent and temporary, both into and out of the countries. These data do *not* show an overwhelming dominance of one-way settlement migration. The patterns revealed by the data are in fact complex flows of temporary and permanent migration both into and out of each of the countries. Figure 16.2 shows that international migration in Australia and New Zealand is more correctly seen as a complex interacting system. This undoubtedly is the same in other so-called 'destination' countries but they do not have the data which allows emigration and circular-temporary migration to be measured. We will now turn to briefly describing recent trends in each element in the migration systems of the two countries.

Permanent Settlement

While both Australia and New Zealand have a long and sustained history of immigration it has been in the post-World War II period that immigration has been especially significant. In Australia Fig. 16.3 shows that the postwar period was an exceptional era in Australia's migration history in terms of the scale of migration. In fact, without postwar migration Australia's current population would be around 10 million less than its 22.7 million. However, it was not just in terms of

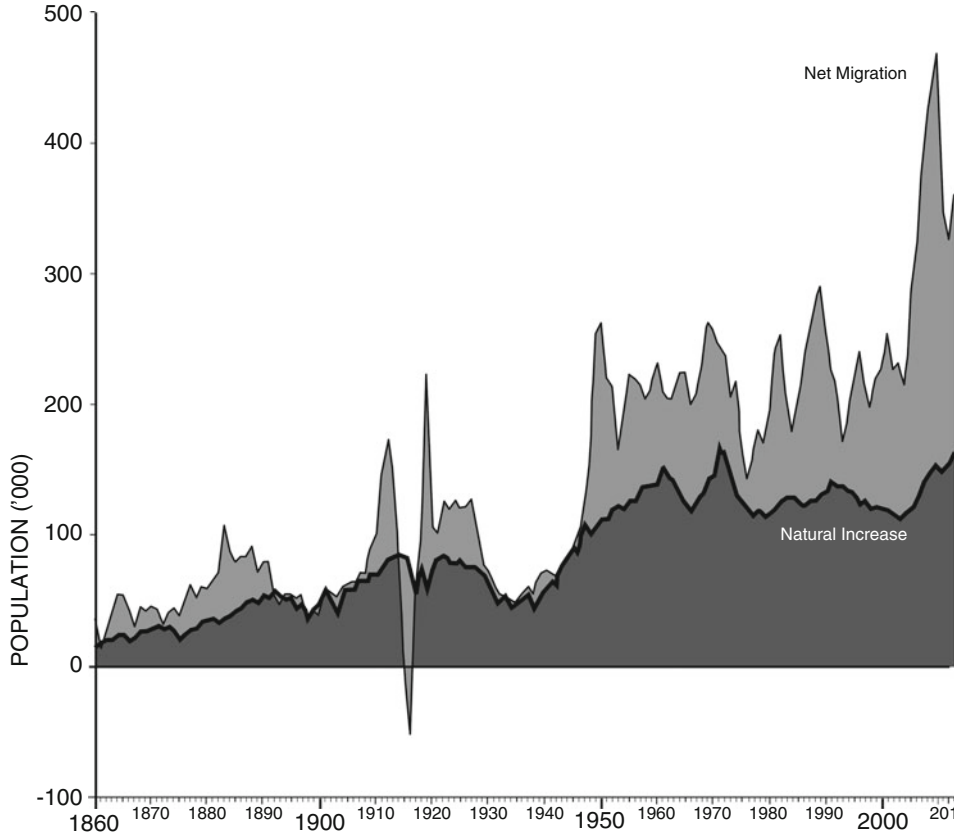

Fig. 16.3 Australia: natural increase and net migration, 1860–2012 (Source: Australian Bureau of Statistics; Borrie 1994)

numbers that WW2 marked an important turning point in Australian immigration. Hitherto all immigration was of persons of British origin, many under assisted passage. Indeed one of the first pieces of legislation of the new Australian Federal Government in 1901 was to introduce a White Australia Policy which totally excluded non-European immigrants[4] and was in response to significant Chinese immigration during the gold rushes of the nineteenth century (Choi 1975). The UK remained a major source of immigrants during the postwar period but there were successive waves of settlers from other areas with shifts in government policy and these are evident in the background of immigrants shown in Fig. 16.4. The following waves can be identified.

1. In the aftermath of World War II there were major labour shortages in the newly expanding manufacturing sector as well as in traditional areas like agriculture. This allied with some continuing notions of 'population or perish' associated with perceived threats of invasion from the north which were strengthened by the Pacific War saw government press to increase immigration. When this demand could not be met from traditional British sources, the government assisted over 300,000 Displaced Persons (DPs) from Eastern Europe to settle in Australia, breaking down a previous almost exclusive orientation on the UK and Ireland.

[4] There was a small immigration of European groups, especially from Southern Europe (Price 1963; Borrie 1954).

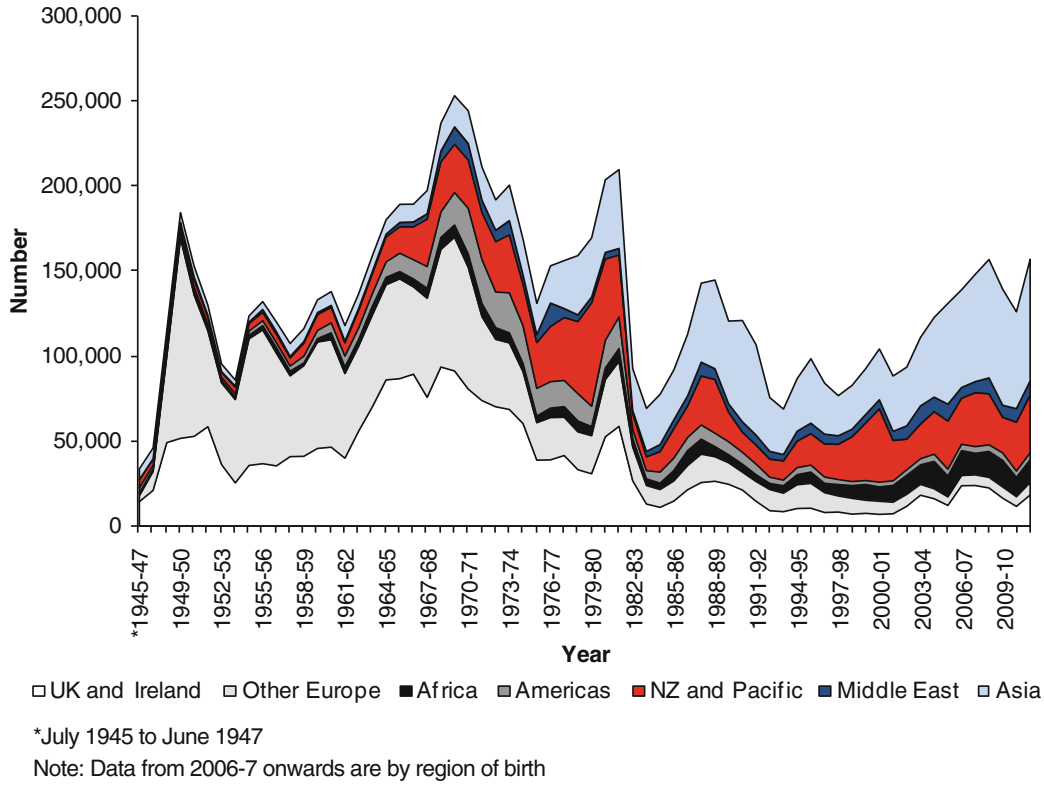

Fig. 16.4 Australia: settler arrivals by region of last residence, 1947–2012 (Source: DIMIA Australian Immigration: Consolidated Statistics; DIAC Immigration Update, various issues; DIAC unpublished data)

The success of the DPs led to an extension of the immigration program to other parts of Europe.

2. Accordingly in the 1950s and 1960s Australia turned to other parts of Continental Europe, especially Southern Europe, so that Italy, Greece, Germany, the Netherlands and Poland became major sources of settlers.
3. In the late 1960s and early 1970s the focus was shifted further eastward with the drying up of European sources due to increased prosperity and lowered fertility in Southern and Continental Europe. Hence there was an influx from Turkey, Egypt and some Middle Eastern countries.
4. The removal of the last vestiges of the White Australia Policy in the early 1970s opened up Australia to substantial Asian migration beginning with Indo Chinese refugees in the 1970s and 1980s and flows from Southeast and East Asia. In the last two decades India and China have become major sources of migrants (Hugo 2008a).
5. There was also an inflow from the Pacific. Many were New Zealanders who, following the Trans Tasman Agreement in 1973, have been able to enter Australia without applying for an immigrant visa (Carmichael 1993). Numbers from other Pacific countries have been, until recently smaller, some initially moving to New Zealand, obtaining New Zealand residence, then moving to Australia.
6. While South Africa has consistently been a major origin of mainly white immigrant settlers, the last 15 years has seen significant refugee settlement from countries like Ethiopia, Sudan and Somalia.
7. In the last decade there have been refugee influxes from Afghanistan, Iran and Iraq.

Table 16.1 Australia and New Zealand demographic variables, 2011 and 2006

Demographic variables	Australia (2011)	New Zealand (2006)
Population	21,507,719	4,027,944
Annual growth rate	1.61	1.51
% Overseas-born	26.1	22.9
% Indigenous population	2.5	18.1
TFR	1.77	2.08
% Less than 15	19.3	21.5
% 65 and over	14.0	12.3
% Moved in last 5 years	41.7	54.7
% Major urban	69.5	22.9

Source: ABS 2011 Census and New Zealand 2006 Census

These successive flows of immigrant settlers from around the world have resulted in Australia being transformed from an overwhelmingly Anglo-Celtic country at the end of WW2 with 97 % of the population being of that background (Price 1979) to one of the world's most diverse nations as data from the 2011 census in Table 16.1 testifies.

Australian and New Zealand immigration and settlement policy is, like Canada, highly planned and government directed. In Australia there have been a number of phases in the development of that policy during the postwar period.

1. The first period from 1945 until the early 1970s is known as the 'long boom' in Australia and was characterised by rapid economic growth associated with industrialisation and expansion and intensification of primary industry. This boom, together with the low fertility of the 1930s and low female workforce participation, meant that in the late 1940s there were chronic shortages of workers. Australia looked to its traditional British sources of immigrants but they could not satisfy the growing demand for workers despite the introduction of assisted passage. Amid considerable public debate the Australian government permitted the entry of the so-called 'Displaced Persons' from Eastern Europe and then other parts of Europe. There were no skill or education criteria in selection of immigrants.
2. This pattern changed dramatically in the early 1970s in several ways. The White Australia Policy was finally buried and the influx of refugees from Indo-China after 1975 heralded the beginning of a continuing influx of Asian settlers into Australia. The early 1970s also saw the end of the 'long boom' and structural economic change with manufacturing employment beginning to decline with increased automation and the movement of labour intensive industry offshore. Moreover, the large cohorts of baby boomers were coming on to the labour market so that the labour shortages in primary and secondary industry which were the primary drivers of immigration in the early postwar era evaporated. Accordingly there was a major shift in immigration policy away from the focus only on recruiting workers toward recognising a number of separate streams in the intake.
   (a) Skilled workers – groups with training or skills in shortage in the Australian labour market.
   (b) Family migrants who were related to earlier generations of migrants.
   (c) Refugee-humanitarian migrants who were recognised under the UNHCR 1952 Convention.
   (d) Others, mainly New Zealanders who have more or less free access to settle in Australia.

   During the period the intake became progressively more closely managed and planned. A Points Assessment system was put in place whereby potential economic/skill settlers are assigned points associated with education/training, work experience, age, English

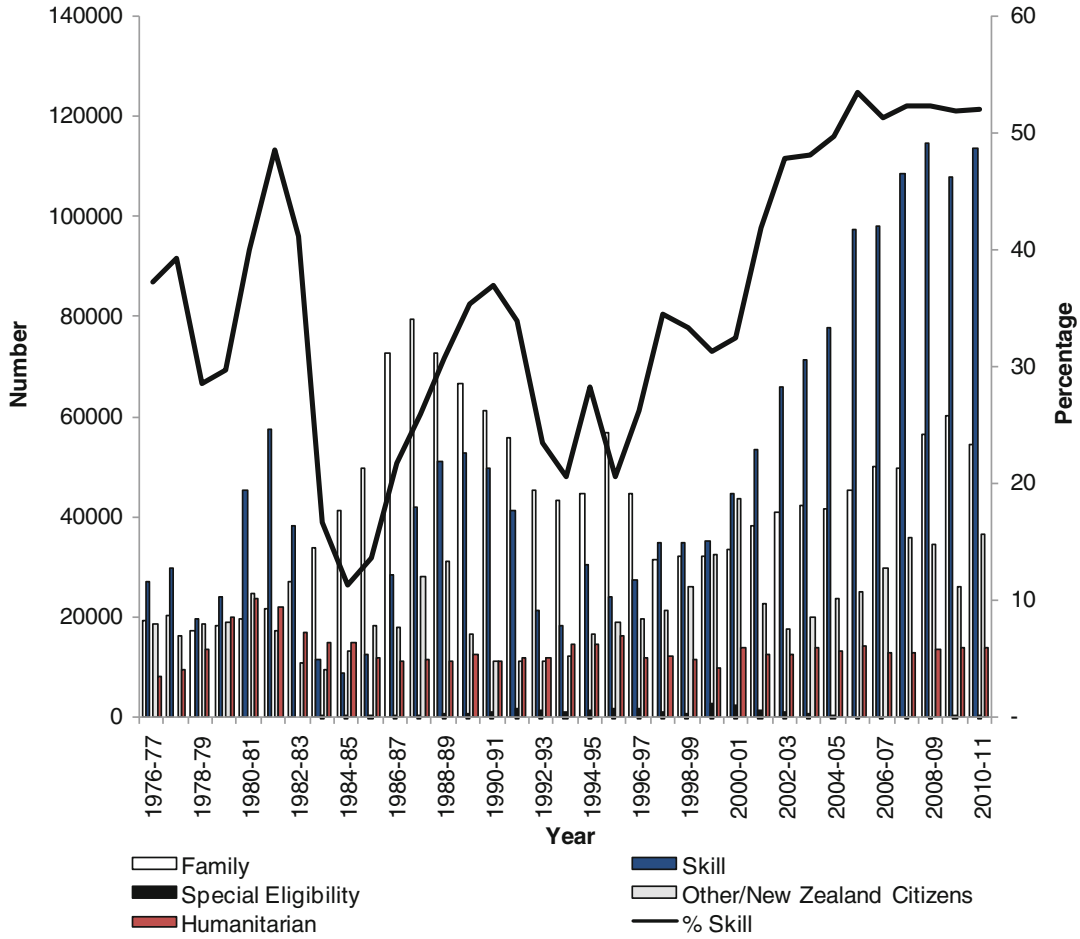

Fig. 16.5 Australia: migration program outcome by stream and non-program migration, 1976–1977 to 2010–2011 (Source: DIAC Population Flows: Immigration Aspects, various issues; DIAC Immigration Update, various issues. Note: Data prior to 1986–1987 for offshore only. Special Eligibility not included prior to 1982–1983)

language ability and other labour market attributes. A moving cut-off level is recognised above which settlers are accepted. Similarly the family migration stream has varied over time in the nature of the relationship to the Australian based family member which would enable entrance to Australia. While there have been many modifications over the years to the way in which each of the four streams has operated, it still forms the basis of the Australian permanent settlement system. Figure 16.5 shows that there have been variations over the years in the relative significance of the major streams. The key feature is that the government plans and caps the numbers in each category[5] and given the country's geography the realised numbers of immigrant settlers is almost exactly that planned at the beginning of the year.

3. A third phase of immigration policy can be recognised as beginning in the mid 1990s (Hugo 1999) and has a number of features:
   - One evident in Fig. 16.5 is an increasing emphasis on skill in the migration program. In fact, whereas skilled migrants

[5] Except for New Zealanders who can enter freely.

made up 23.7 % of the intake in 1993–1994, they made up 62.1 % in 2008–2009. It has been a deliberate government strategy to relate the migration program to the skill needs of the labour market. In more recent years the focus has been on migrants having a job before they arrive and employers playing a greater role in selecting immigrants with skill sets in shortage in the Australian labour market.

- Family migration has become more restricted with the program focusing more on fiancée and marriage partners.
- Perhaps the most distinctive feature, however, has been the introduction of a suite of temporary migration visa categories discussed in the next section. Hitherto Australian immigration policy had eschewed temporary immigration of workers and focused purely on permanent settlement. However, as is shown later, the temporary migration program has been even more focused on skilled migration than the permanent migration program.
- Beginning in 1997–1998 a number of new visa categories have been introduced under the State Specific and Regional Migration Scheme (SSRM) which directs immigrants to settle in particular areas – away from the major metropolitan centres of the east and southeast coastal areas. It gathered particular momentum since 2003 with State governments mounting substantial independent immigration, recruitment and settlement activities. This marks two particular shifts from previous Australian immigration policy (Hugo 2005):
  - The Australian states and territories are becoming increasingly involved in immigration and recruitment of immigrants which has in the past been almost totally a national government responsibility.
  - Many of the SSRM migrants enter Australia as temporary residents then after a period (around 2 years) in which they demonstrate that they have successfully adjusted to the labour market and Australia more generally. They then are granted permanent residence.

The essence of the SSRM was to enable employers, state and local governments and families in designated 'lagging economic regions' to sponsor immigrants without the immigrants having to fully meet the stringent requirements of the Australian Points Assessment Scheme. In 2010–2011 it accounted for about a third of skilled immigrants settled in Australia (DIAC 2012a) and has significantly changed the pattern of settlement of recent immigrants (Hugo 2008b).

The pattern of immigrant settlement and evolution of permanent immigration policy in New Zealand has, in many respects, been similar to that of Australia except that it has engaged Pacific Island Countries (PIC) much more than has Australia (Bedford and Hugo 2012). In recent years, however, *net* migration has been a much smaller contributor to population growth than has been the case in Australia and accounts for New Zealand's national rate of population growth being somewhat lower than that in Australia. Figure 16.6 shows that net migration has been substantially lower than natural increase in New Zealand in all but two of the last 15 years. In 2010–2011 net migration (3,900) was only 10 % of national population growth. As in the Australian case, net migration is considerably more volatile than natural increase. The small contribution of net migration is a function of both immigration and emigration being very high in New Zealand with the latter counterbalancing much of the former. This is evident in Fig. 16.7 which shows inflows, outflows and net migration over the last 15 years. There are key differences, however, in the composition of the inflows and outflows. This is apparent in Table 16.2 which shows that departures outnumber arrivals two to one among New Zealand citizens but the opposite is the case for non-New Zealand citizens.

Some of the key policy shifts have been as follows (Hugo et al. 2008: 138):

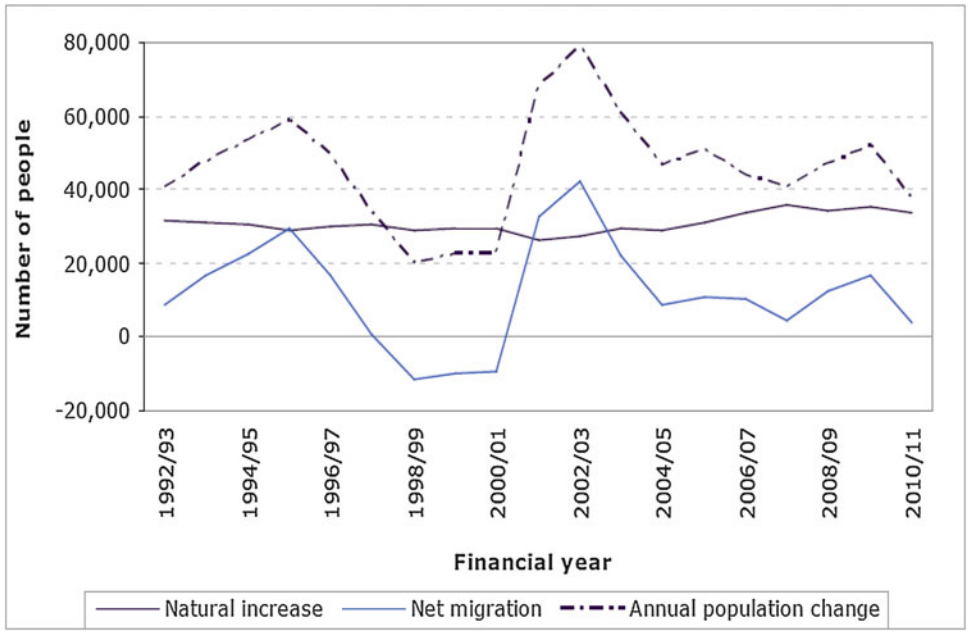

Fig. 16.6 Components of population growth, 1992/1993–2010/2011 (Source: Department of Labour, New Zealand 2011, 17)

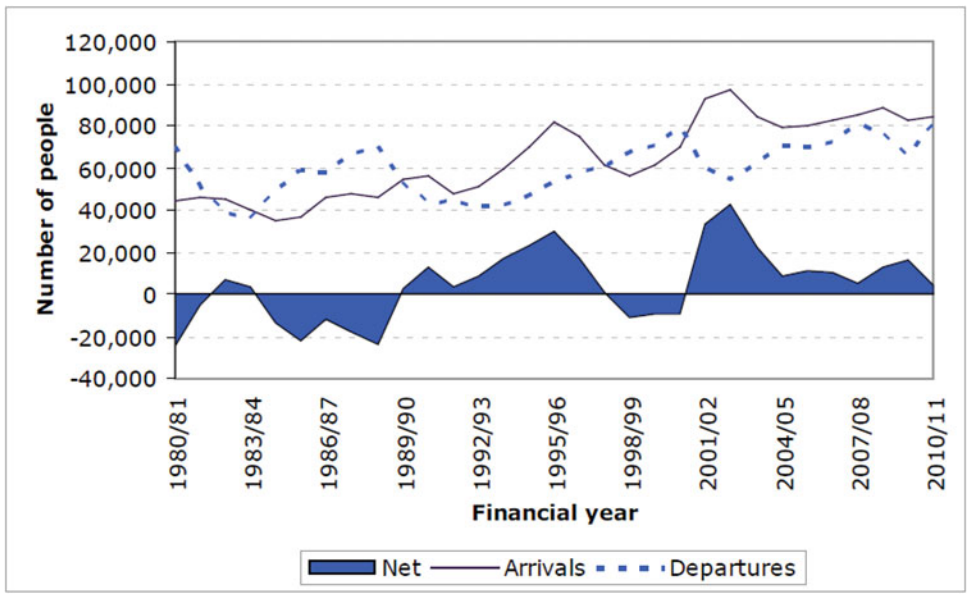

Fig. 16.7 Annual permanent and long term migration flows, 1980/1981–2010/2011 (Source: Department of Labour, New Zealand 2011, 18)

Table 16.2 New Zealand: permanent and long term migration flows, 2008/2009–2010/20011

Permanent and long-term migration flows	Year	Arrivals	Departures	Net migration
New Zealand citizens	2008/09	24,800	52,500	−27,700
	2009/10	26,200	40,400	−14,200
	2010/11	23,800	53,700	−29,900
Non–New Zealand citizens	2008/09	63,400	23,300	40,100
	2009/10	56,100	25,400	30,700
	2010/11	60,200	26,400	33,800
Total	**2008/09**	**88,300**	**75,700**	**12,500**
	2009/10	**82,300**	**65,800**	**16,500**
	2010/11	**84,000**	**80,100**	**3,900**

Source: Department of Labour, New Zealand 2011, 20
Note: *Figures* may not sum due to rounding

- Like Australia, for the first three postwar decades New Zealand immigration was dominated by British, and to a lesser extent, other Europeans and no skill criteria were applied. A review in 1973, however, resulted in unrestricted access of British immigrants being terminated and everyone had to apply for residence through either the family, humanitarian, refugee or general categories as in Australia. In addition, people from selected PICs were allowed free entry into New Zealand, and the Trans-Tasman Agreement between New Zealand and Australia allowed citizens of either country to live and work in the other without visas and permits (Bellamy 2008).
- New Zealand's immigration policy was reviewed again in 1986. This resulted in removing the traditional source country preference list and maintained a system of an occupational priority list (OPL) (Winkelmann 2001). A Business Immigration Programme (1986) was introduced to allow the entry of migrants with proven business ability and investment capital. Both these policies were developed with the intention of being more responsive to labour market needs by selecting migrants that would help strengthen New Zealand's economy.
- In 1995, skilled immigration policies were reviewed further to ensure that the policy was being responsive to the changing labour market needs. Therefore the General Category was replaced by the General Skills Category, which was a points-based system for recruiting skilled migrants (Bellamy 2008). Further changes were made 3 years later with the introduction of the Immigration Amendment Act 1998. One of the changes included recognising qualifications held by international students. Also, international students with a qualification recognised under the GSC were exempt from the 2-year work experience requirements.

As in Australia, these changes saw an increasing emphasis on skilled and business migration as a mechanism for enhancing national human capital. It also saw a significant increase in diversity away from traditional European source countries. Asia became a source of more than half of immigrant settlers in the 1990s (Bedford and Lidgard 1997), although this later led to increasingly stringent English language requirements becoming part of the Points Selection criteria (Farmer 1997; Trlin 1997). Similarly, English language requirements were strengthened in Australia.

The key difference to Australia has been with respect to Pacific Islands (Hugo et al. 2008, 137, 169). There was some unskilled labour immigration in the 1950s, 1960s and 1970s to fill labour shortages, especially in manufacturing (Gibson 1983). New Zealand introduced a Pacific Access Visa category which provides limited access to settlers from Tonga, Kiribati, Tuvalu

and Fiji and has a quota for 1,100 Western Samoa settlers under a 'Treaty of Friendship'. Hence the Pacific Islander population has grown from around 2,200 in 1945 to 266,000 in 2006 (Statistics New Zealand 2010).

Refugee-Humanitarian Migration

Refugee-humanitarian migrants are an important part of the permanent immigrant settlement in both Australia and New Zealand. Although both countries have a long history of accepting refugees recognised by the UNHCR and its predecessors for third country settlement the modern forms of the program as a part of the immigrant intake with a specified target[6] set each year began in 1981 in Australia and 1986 in New Zealand. For most of the postwar years the great majority of humanitarian settlers were 'recruited' offshore – identified through the UNHCR or IOM and brought to Australia and New Zealand where they were provided with considerable government and community support to assist settlement. Despite their disadvantages and barriers in the initial years, they have been very successful settlers although there is still evidence of the 'refugee gap' with many not able to hold jobs or earn incomes commensurate with their skills and experience (Hugo 2014a). The waves of refugee settlement corresponded to major origin conflict areas – Europe in the 1940s and 1950s, Indo China in the 1970s and 1980s, Middle East and Europe in the 1980s and 1990s and Middle East, Afghanistan and Africa in more recent times.

In Australia there has been an important change with 'onshore' arrivals of asylum seekers not only increasing but becoming a political issue of major importance and the dominant national immigration issue of the last 15 years. These are made up of both boat and sea irregular arrivals of people without a visa who claim asylum. Boat arrivals began with a small number from Indo China and China in the 1980s and 1990s but subsequently have come mainly from Afghanistan, Iraq, Iran, Myanmar and Sri Lanka along well organised trafficking routes (Hugo and Napitupulu 2015). They have reached their largest numbers in 2009–2010 (5,609), 2010–2011 (4,940) and 2011–2012 (7,983). While these numbers are small, both in comparison with the international numbers of asylum seekers (895,284 at the end of 2011) (UNHCR 2012) and in relation to Australia's total net migration intake (208,336 in 2011–2012) (ABS 2012) they have become the focus of considerable public, media and political debate, much of it of an alarmist, populist and sensationalist nature preying upon public security fears and lacking empirical evidence (Hugo 2011). Responding to this successive Australian governments (both Liberal [conservative] and Labour) have introduced controversial initiatives such as interning asylum seekers in detention centres while their case for asylum is assessed and offshore solutions which divert asylum seekers to detention centres in the Pacific while their cases are assessed.

In 2005 Australia introduced a program to assist humanitarian settlers who have no relatives or contacts in Australia to settle in regional areas away from the main 'Gateway' capital cities where refugees and other immigrants have traditionally settled. This has become part of increasing settlement of migrants in regional areas and around a fifth of refugees settle in these areas currently (Hugo 2014b).

Emigration

There is a tendency for Australia and New Zealand to be categorised as purely immigration countries but, in fact, they also have experienced significant increases in emigration and departures on a permanent or long term basis. Figure 16.8 shows that in Australia in 2011–2012 permanent departures reached 87,478, of whom 48.9 % were born in Australia. The numbers of Australia-born leaving permanently has more than tripled from 12,771

[6] The current refugee caps are: 20,000 in Australia (increased from 13,500 in 2012) and 750 in New Zealand.

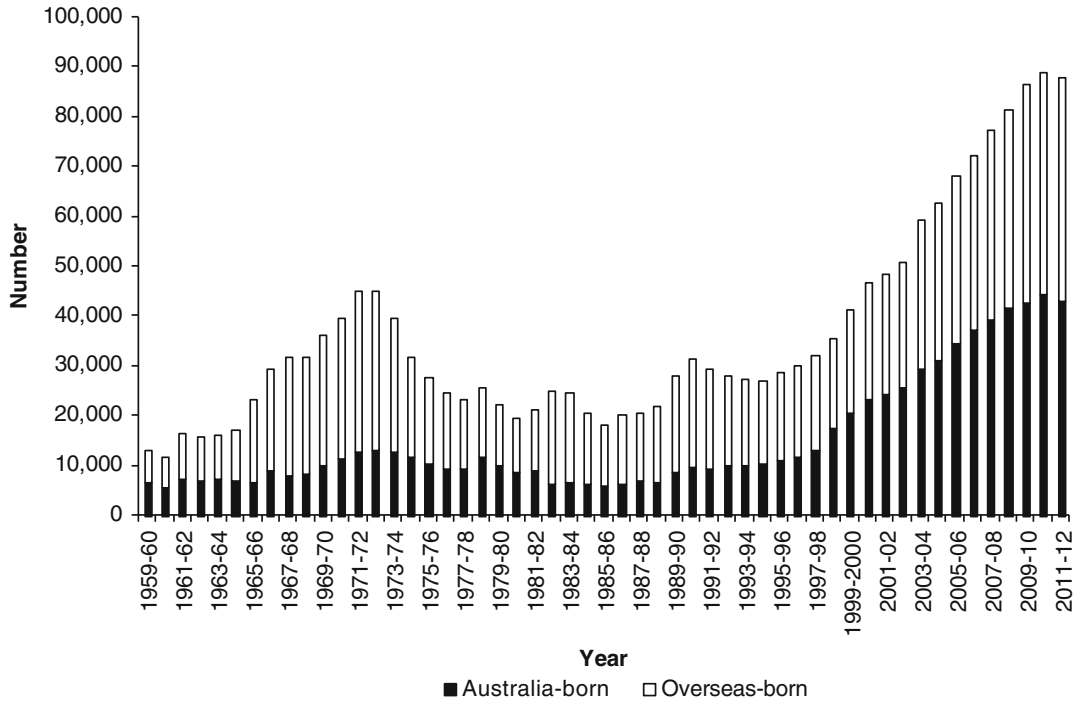

Fig. 16.8 Permanent departures of residents from Australia, 1959–1960 to 2011–2012. Note: Prior to 1983, overseas-born departures constitute former settler departures. Australia-born departures constitute permanent departures other than former settlers (Source: DIMIA Australian Immigration Consolidated Statistics; DIAC Immigration Update, various issues

in 1997–1998 to 42,808 in 2011–2012. Over the same time period the number of resident long term departures decreased from 79,422 to 68,680. The rate of settler loss, much of it return migration of former settlers varies considerably among particular birthplace categories (Hugo et al. 2003) with especially high rates among those born in New Zealand, United Kingdom, east Asian nations such as China and Japan and USA. There are some interesting patterns of difference among Asia-born groups with those from Northeast Asia having relatively high rates of return and those from South Asia quite low rates (Hugo 2008c). The emigration outflow is highly skilled – more so than the immigration intake although the difference is converging.

It is apparent that global cities are a key component in the Australian diaspora indeed virtually all emigrants move to major cities. To take the example of the United Kingdom, the 2001 census detected 107,866 Australia-born residents and of these 41,486 (38.5 %) lived in the London region. It has been argued (Hugo 2008d) that there is a form of the escalator effect occurring (Fielding 1992; Chapman 2004) involving a combination of internal and international migration. As Australia's world city (Hugo 2008d), Sydney attracts selectively young highly educated, highly skilled migrants from elsewhere in Australia. Indeed there is a net internal migration loss from Sydney of other age categories. There is some evidence that Sydney has become a launching point of these young people who spend some years gaining experience and developing networks in Sydney then emigrating to higher order world cities either on transfer in multinational companies or successfully applying for jobs within increasingly international labour markets. The key point is that the growing Australian expatriate community is an

overwhelmingly urban based one and it tends to concentrate in the global (Sassen 1991) and world cities (Friedmann 1986) of Europe, North America and Asia.

As the scale of emigration from Australia has increased, there has been increased attention devoted to the whole concept of diaspora and diaspora policy. The increased scale of the exodus was significant enough to warrant an Australian Senate 'Inquiry Into Australian Expatriates' in 2003 with the following terms of reference:

1. The extent of the Australian diaspora.
2. The variety of factors driving more Australians to live overseas.
3. The costs, benefits and opportunities presented by the phenomenon.
4. The needs and concerns of overseas Australians.
5. The measures taken by comparable countries to respond to the needs of expatriates.
6. Ways in which Australia can better use its expatriates to promote economic, social and cultural interests.

The Australian Senate (2005) released its report on Australian expatriates and recommended a range of policy developments although little follow-up has occurred.

New Zealand has a similar sized diaspora of between 600,000 and 800,000 expatriates and emigration levels in New Zealand are around the same levels as in Australia. However, the outflow and diaspora gain more media attention because of their greater size in relation to both the national populations and the immigration intake. Gamlen (2007) estimates the size of the New Zealand diaspora as between a tenth and a fifth of the total New Zealand population and a quarter of its post-school educational workforce. While New Zealanders have been identified as living in more than 150 countries (KEA 2006), the largest 'colony' is in Australia where there was an estimated stock of 647,863 New Zealand citizens in 2012 (DIAC 2012b). At the 2011 Australian census there were 483,397 New Zealand-born persons and 187,214 persons of New Zealand ancestry, equivalent to 2.2 and 0.9% respectively of the Australian population.

Although there have been changes over the years there has been more or less unrestricted movement of Australians and New Zealanders across the Tasman Sea separating the two countries (Carmichael 1993; Bedford et al. 2003). New Zealanders are granted a Special Category Visa upon arrival and this remains valid as long as they wish to stay in Australia. The stock of New Zealanders in Australia was 548,256 in mid 2009, an increase of 5.2 % over the previous year (DIAC 2010, 87). Fig. 16.9 shows that there have been significant fluctuations in the numbers of New Zealanders moving permanently to Australia. The numbers of New Zealand citizens moving permanently to Australia (44,304 in 2011-2012) is substantially larger than the number of New Zealand-born (30,089 in 2011–2012). This resulted in 2001 in the Australian government fearing that New Zealand was being intendedly used by people from other countries as a less difficult way to enter Australia since for many years their Points Assessment Test Score was not as high as that of Australia. This resulted in Australia amending its regulations so that New Zealanders were not automatically eligible for social security payments in Australia (Bedford et al. 2003).

A distinctive feature of New Zealander movement to Australia is a high level of temporary work related migration and significant return migration among many long term settlers (Sanderson 2009). Another element which differentiates New Zealand migration to Australia from that originating from other countries is that once it is controlled for age there is little difference between the New Zealand citizen population in Australia and the Australia-born (Hugo 2004c). The New Zealand-born in Australia have a higher level of workforce participation (78.5 %) compared with the Australia-born (68.9 %) and a similar unemployment rate (4.8 %) (DIAC 2009, 85). Indeed international migration between Australia and New Zealand has more similarities with internal migration patterns within Australia (Bell and Hugo 2000) than it does with other international

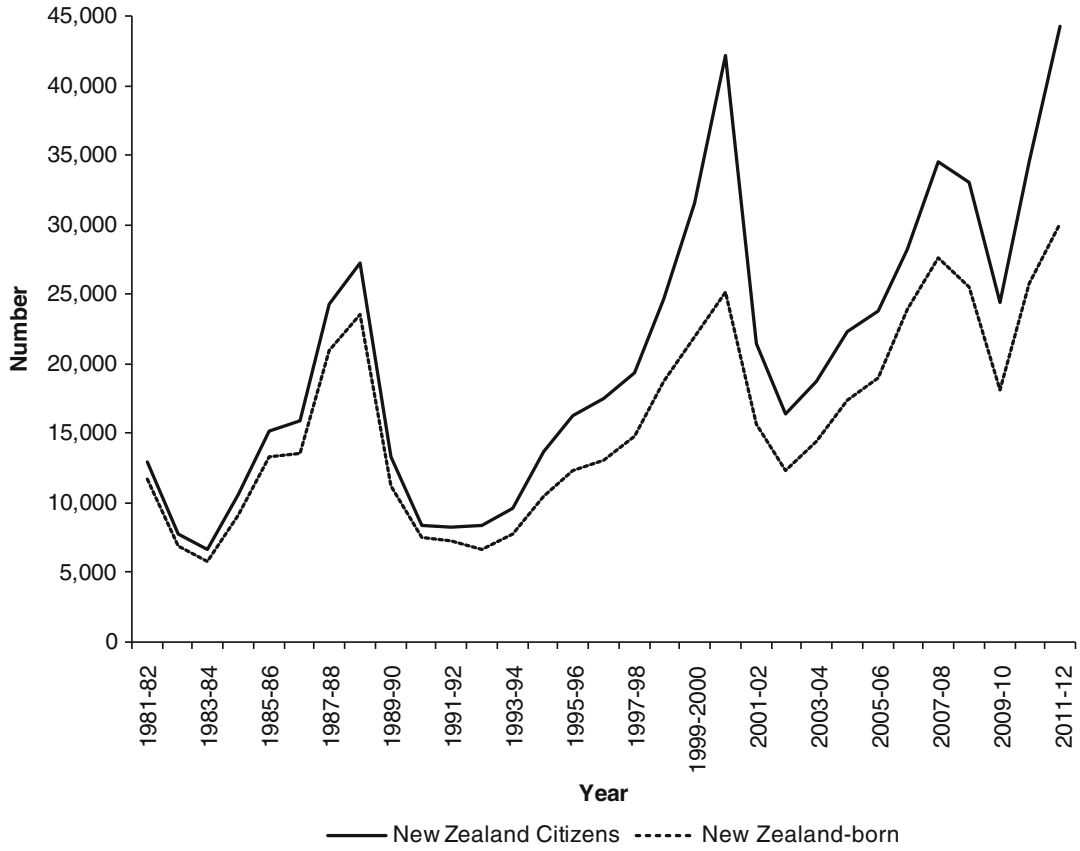

Fig. 16.9 Australia: permanent arrivals of New Zealand citizens and New Zealand-born persons, 1981–1982 to 2011–2012 (Source: DIMIA Australian Immigration: *Consolidated Statistics*, various issues; DIAC Immigration Update, various issues; DIAC Population Flows: Immigration Aspects, various issues

migration flows. This reflects the fact that despite Australia and New Zealand being separate nation states they largely form a single labour market.

Temporary Migration

The Australian and New Zealand migration data systems categorise persons moving into and out of the country in the following ways:

- *Permanent movement* – persons migrating to Australia and residents departing permanently.
- *Long term movement* – visitors arriving and residents departing temporarily with the intention to stay in Australia or abroad for 12 months or more, and the departure of visitors and the return of residents who had stayed in Australia or abroad for 12 months or more.
- *Short term movement* – travellers whose intended or actual stay in Australia or abroad is less than 12 months.

Table 16.3 indicates how significant non-permanent migration is in both countries. Moreover, long term and short term movement has increased significantly faster than permanent migration. This is a function of greater ease of international travel, internationalisation of labour markets, proliferation of social networks but also the introduction of a number of special visas in both countries to facilitate temporary movement, especially that of people permitted to work in Australia and New Zealand. Indeed one could

Table 16.3 Australia and New Zealand: changes in movement into and out of country, 2000–2001 and 2011–2012

Country			2000–01	2011–12	Percent change
Australia	Permanent	In	107,366	158,936	48.0
		Out	46,521	87,478	88.0
	Long term	In	241,204	493,226	104.5
		Out	166,376	281,345	69.1
	Short term	In	8,574,338	13,938,759	62.6
		Out	8,633,183	14,084,536	63.1
New Zealand	Permanent and long term	In	69,489	84,402	21.5
		Out	78,755	87,593	11.2
	Short term	In	3,192,964	4,769,613	49.4
		Out	3,173,147	4,801,872	51.3

Source: DIAC unpublished data and New Zealand Labour and Immigration Research Centre

argue that the introduction of these visas is the greatest change in migration policy in the two countries over the last two decades since for most of the postwar period they eschewed temporary worker migration and focused almost exclusively on permanent settlement. However, in a globalising world in which transnationalism has replaced permanent settlement as the dominant international migration paradigm (Glick Schiller et al. 1995), New Zealand and Australia have quickly and effectively transformed their policy and now have a suite of visa categories in which migrant workers can gain temporary residence with the right to work (Hugo 1999).

The trends in the numbers of the main visa categories of temporary migrants with the right to work in Australia are shown in Fig. 16.10. The number of Working Holiday Maker (WHM) program visas granted reached record levels of 214,644 in 2012. The WHM program allows young people (aged 18–30 years) from 19 nations to have working holidays in Australia for periods of up to a year. The fact that WHMs fill some important niches in the labour market such as in harvesting, tourist activity, restaurants etc. has been recognised by recent legislation allowing WHMs to extend their stay in Australia if they work in particular areas of labour shortage (Tan et al. 2009; Harding and Webster 2002).

One of the most important changes in Australian immigration policy was the introduction of skilled temporary residence visas. This has resulted in substantial flow of long term and short term skilled entrants to work in Australia. Long term (457) visas reached a record 125,070 in 2012 (DIAC 2012c).

The Temporary Business Entry Visa (457), similar to the H1B visa in the United States, is initiated by employers and is not capped. It is even more focussed on skill than the permanent migration program and recent research has shown it has been generally quite successful (Khoo et al. 2007). However, the 457 program has come under intense scrutiny with some employers being accused of misusing the scheme to displace Australian workers, especially in some regional areas. Union movement (Australian Manufacturing Workers Union 2006) have raised issues of migrant workers being ready to settle for lower wages as well as occupational health and safety issues covered by lack of ability to speak English. A Parliamentary Inquiry (Joint Standing Committee on Migration 2007, 2) made a number of recommendations to improve procedures associated with the program which have seen considerable modification.

One of the largest categories of temporary residents with the right to work are foreign students and Fig. 16.10 shows that there has been a rapid increase in the number of foreigners moving to Australia to study and Asians have made up around three quarters of them. Australia is second only to Switzerland in the proportion of its post-school education students made up of full fee paying foreigners. International education activity contributed $15.3

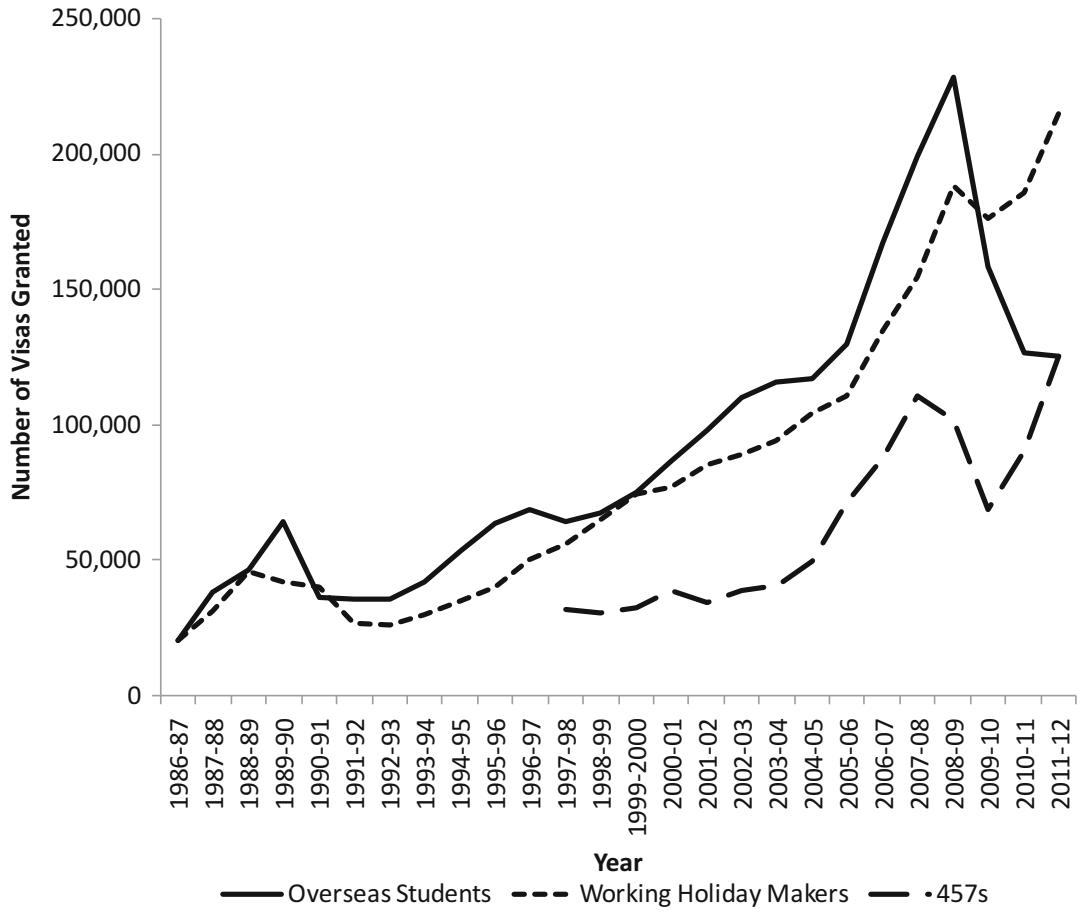

Fig. 16.10 Australia: temporary migration, 1986–1987 to 2011–2012 (Source: DIAC Population Flows: Immigration Aspects, various issues; DIAC 2012c

billion in export income to the Australian economy in 2011–2012 (Australian Education International 2012). The numbers peaked at 227,924 in 2008–2009 but they subsequently fell to 125,119 in 2011–2012. This was a function of the government making significant changes in eligibility for student visas and rules governing application for permanent residency among overseas students after they have completed their studies. Of the largest six countries of origin, five are Asian – China (20 %), India (13) Korea (5) and Malaysia and Thailand (4 %).

At 31 December 2011 there were a stock of 1,045,839 persons present in Australia on a temporary visa (DIAC 2012d) over half (52.4 %) of whom were from Asia. Hugo (2006) has shown that temporarily resident workers now make up around 4 % of the national workforce and are strongly concentrated in particular niches of the labour market. At present the temporary worker visa categories are restricted to the four most skilled occupational categories but there is pressure from some groups to allow semi-skilled and unskilled workers to be included in the program but this has been resisted by the government.

Figure 16.11 shows that New Zealand has experienced a similar expansion in numbers of temporary migrants as Australia. As in Australia, export of education is among the nation's top five export industries generating $2.3 billion and 32,000 jobs (NZ Department of Labour 2011, 26) at 87,075 in 2003–2004. The numbers then fell away (Hugo et al. 2008, 158) because of 'uncertainty over immigration policy, increased

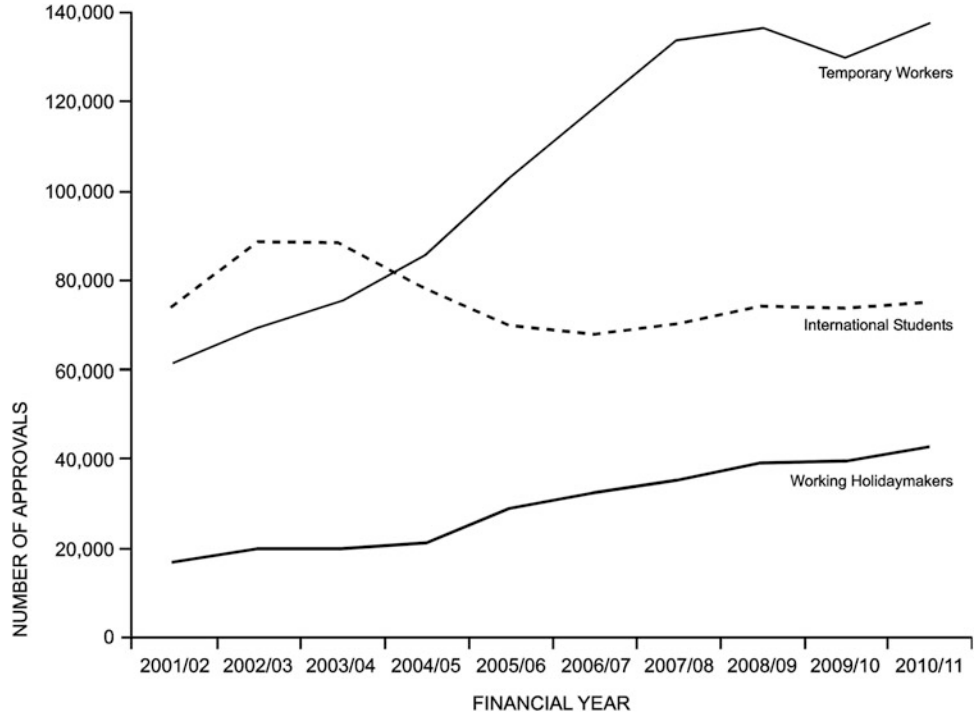

Fig. 16.11 New Zealand: temporary migrant visa approvals, 2001–2002 to 2010–2011 (Source: Department of Labour, New Zealand 2011)

competition from Canada, Australia and the UK, high exchange rates making it more expensive to study in New Zealand, negative media reports, and issues around safety and student protection'. There has been a recovery of numbers with China and India being the main origins.

In 2010–2011, 137,011 persons were issued temporary work visas and Fig. 16.11 indicates that the numbers have increased over the last decade. Working holiday makers whose numbers are shown in the diagram are the largest numbers given the right to enter New Zealand temporarily to work. However, it also includes a number of work policies including the Recognised Seasonal Employer Scheme considered below. The main source countries of temporary workers are the United Kingdom (13.4 % in 2010–2011), India (11 %), China (8 %), Germany (7 %), the United States (6 %) and the Philippines (5 %) (Department of Labour 2011, 31).

A key feature of Australia and New Zealand's temporary labour migration schemes is that while their permanent migration programs are highly government controlled with annual targets and caps being applied to intakes of skill, family and humanitarian migrants, their temporary migration programs are very much market driven with no caps being imposed by government. Accordingly they are very much influenced by economic trends. This is shown in Fig. 16.12 which shows the close correspondence between the intake of 457 s in Australia and the numbers of jobs being advertised. Another important element has been the fact that the temporary labour migration schemes have only been available for high skilled workers deemed to be able to meet local skill shortages and contribute to national stocks of human capital. Other destination countries have also tended to develop schemes to meet shortages of low skilled labour, especially in sectors like intensive agriculture (Martin 1988). Until recently Australia and New Zealand have avoided such policies, and migrant labour in seasonal work, harvesting etc. has generally

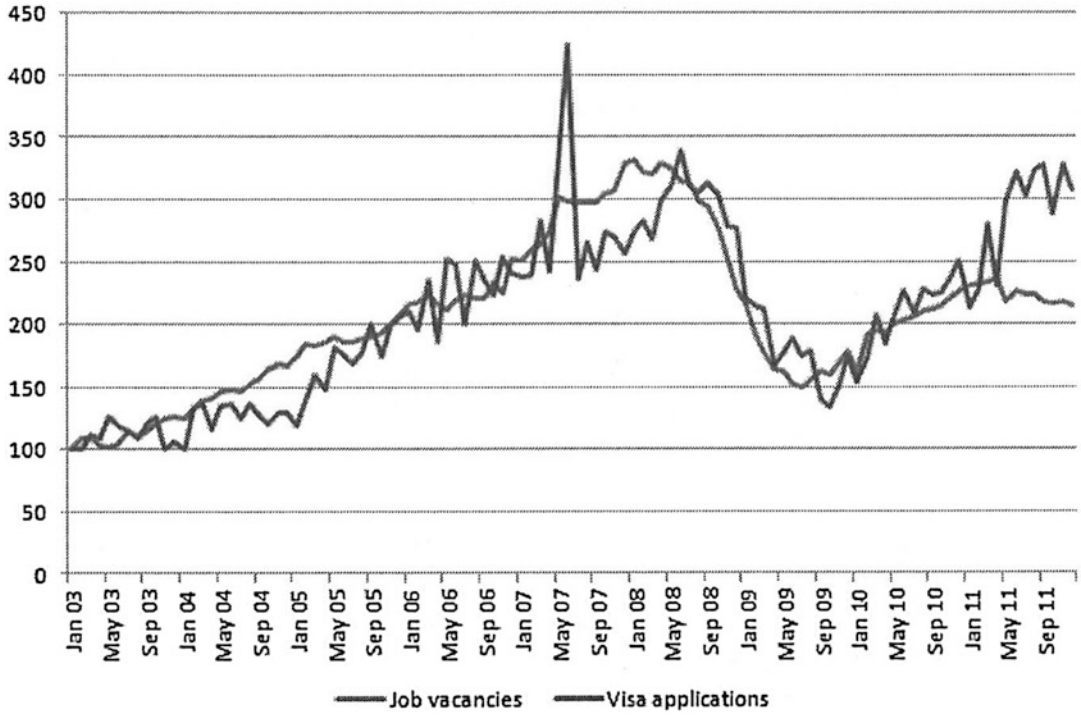

Fig. 16.12 Australia: job vacancies and demand for temporary skilled migrant workers, 2003–2011 (Source: Cully and Pejoski 2012)

been of working holiday makers and, to a lesser extent, refugee-humanitarian settlers (Hugo 2001). This has changed recently, especially in New Zealand.

There have been considerable pressures from time to time in both countries to extend the temporary migration visas to unskilled and semi skilled workers. In Australia there have been a number of government enquiries and submissions from a range of industry groups. Previous Australian governments have strongly resisted opening Australia to unskilled temporary migration from less developed countries despite pressures from particular employers, especially the harvesting sector (Senate Standing Committee on Employment, Workforce Relations and Employment 2006). Their opposition is based on the following arguments (Hugo 2005):

- A significant unemployed population in Australia would suggest that employers are not paying adequate wages or providing appropriate conditions for Australian workers.
- The integrity of Australia's immigration program would be undermined because it involves unskilled workers. Moreover, if it is restricted to particular countries (e.g. Pacific nations) it would be discriminatory.
- It has been questioned whether the unskilled workers would gain from temporary migration because of the high costs of travel in relation to the amount of work available and the wages paid.
- The impact of the loss of human resources on the economies of home nations.
- Compliance concerns that the temporary workers would 'run away' from employers and settle permanently developing a large 'illegal' migrant population.
- The chequered history of guest worker programs which have seen exploitation of temporary labour migrants.

Moreover, in recent years the existing 457 program has come under attack because some unscrupulous employers have underpaid migrant workers and used them to replace Australian workers (Birrell et al. 2006; Kinnaird 2006).

Even if it is accepted that Australia does not have a contemporary shortage of unskilled and semi-skilled workers it would seem there will be shortages in the future. Moreover, in the context of the discourse on migration and development (World Bank 2006a; United Nations 2006) there are some arguments which could be mounted to suggest that well managed, targeted and limited temporary and permanent migration programs involving unskilled and semi-skilled workers can produce significant positive developmental impacts in origin countries. There has been a particular focus on Pacific countries as a source of such workers (Maclellan and Mares 2006; World Bank 2006b).

New Zealand has been much more proactive in this area. In October 2006 the Government announced a new seasonal work programme, the Recognised Seasonal Employer scheme (RSE), to assist employers in particular industries to attract seasonal workers from other countries. The scheme allows for priority to be given to workers from the Pacific for seasonal work opportunities in the horticulture and viticulture industries in planting, maintaining, harvesting and packing crops where there are no New Zealand workers available. The initiative attempts to provide a mutually beneficial situation where New Zealand employers have a secure labour supply that they can utilise in successive years and for the Pacific to have access to the New Zealand labour market, thereby boosting the skills and economies of Pacific nations. The RSE scheme was officially launched on 30 April 2007.

The RSE policy represented a substantial departure in immigration policy by Australia and New Zealand. The RSE policy is geared toward Pacific states and employers are able to recruit from eligible Pacific Islands Forum Member Nations – Federated States of Micronesia, Papua New Guinea, Kiribati, Nauru, Palau, the Republic of the Marshall Islands, Solomon Islands, Tonga, Tuvalu, Samoa and Vanuatu. However, employers may recruit from other countries if the RSE administration is satisfied they have made a reasonable attempt to recruit from the Pacific or they have a pre-established relationship with a particular country. RSE employees from the Pacific can stay in New Zealand up to 7 months at a time (9 months if they are from Kiribati and Tuvalu in recognition of higher travel costs) and they can return in consecutive seasons. Employers are encouraged to build long term relationships with the Pacific Islands residents and to build their skills over time. There are plans to develop appropriate training for migrant workers at home and in New Zealand. Employers are obliged to:

- Pay half travel costs.
- Pay for an average 30 h per week for the duration of employment.
- Provide pastoral care, ongoing accommodation, basic health care and local transport.
- Make a financial contribution to locating a worker who fails to return home at the end of their employment.

Over the period June 2007 to June 2011 some 26,415 workers were deployed in New Zealand under the RSE scheme – 76.7 % from the Pacific and 23.3 % from Asian countries. The main origin countries have been Vanuatu (9,010), Tonga (5,160), Samoa (4,459) and Solomon Islands (1,056). While there have been minor issues, the impact of the program in both New Zealand and the home countries of workers have shown that all groups have benefited from the scheme (Bedford 2013).

In Australia a scheme has also been introduced (Pacific Seasonal Worker Scheme – PSWS) but progress has been more limited. It was introduced as a Pilot Scheme in 2008 and made permanent in 2011. Take-up of the scheme has been relatively low with only 1,100 workers being deployed up to March 2012 (Hay and Howes 2012). One of the main reasons for the lack of take-up is that much of the seasonal agricultural and horticultural work is done by Working Holiday Maker visa holders.

In 1998 the Australian government, for security purposes, assigned a personal identifying number to each person who enters or leaves

Australia so that it is possible to trace the pattern of movement of individuals (Hugo 2008a). This data has proved useful in being able to establish the complexity of this movement and the significance of repetitive moves, circular migration, reciprocal movements and hyper mobility among particular groups. Some of the key patterns that have been identified (Hugo 2008a; Poot and Sanderson 2007) from this data are as follows:

- There are often strong connections between 'permanent' and 'temporary' migration. For example (Hugo 2008a), permanent settlers engage in frequent return travel to their homelands after they settle in Australia. This often takes the form of 'astronauting' (Pe-Pua et al. 1996) whereby one family member maintains their work in the homeland (usually some form of business) leaving the rest of the family behind, especially children, taking advantage of Australia's high quality, cheap education system.
- There is a high level of permanent return among permanent settlers from some countries. For example, China has been one of the four largest origins of settlers to Australia over the last 15 years but around a third of migrants have left Australia to return home or move to a third country (Hugo 2008a).
- Former settlers returning to their homeland make frequent temporary return visits to Australia.
- Among those temporarily visiting Australia from Asian countries, many make several visits each year and indicate that they are engaging in business on those visits.
- There is a high level of 'reciprocal' migration of the Australia-born moving to Asia and the Pacific on a permanent or long term basis.
- There is a strong pattern of bilocality among many settlers from Asia in Australia. The findings of Ley and Kobayashi (2005) that there is a life cycle dimension to this is repeated in Australia – for example, with families spending the time that their children are in education in Australia but returning to Hong Kong when they have retired or semi-retired (Hugo 2009a).
- There are high levels of return migration (both permanent and temporary) among Australians and New Zealanders who settle in other countries (Hugo 2009b; Bedford and Ho 2006).
- The flow of New Zealanders to Australia illustrates how dichotomous concepts of permanent versus temporary migration are increasingly outdated. Poot and Sanderson (2007) show that among 'permanent' Kiwi settlers to Australia, one third re-migrates within 3 years. However, New Zealand citizens living in Australia, but born outside NZ, are less likely to remigrate to New Zealand

The Australian and New Zealand flow data demonstrate conclusively that depiction of international migration in those countries as mainly a south-north movement from Asia-Pacific countries is incorrect and that a highly dynamic and interactive migration system operates in the region.

Transitions

While they have been dealt with separately here there is a great deal of blurring between temporary and permanent migration (King 2002). Both in terms of temporary migrants transferring to permanent residency and immigrants deciding to leave Australia and New Zealand there is significant category jumping. We are especially however concerned with the transitioning from temporary to permanent residence given the substantial increase in temporary worker migration which was documented in the previous section. The pattern of settlers being increasingly drawn from the pool of temporary migrant workers and students already resident in a country has been designated '*designer migrants*' by Simmons (1999). This refers to a situation whereby potential migrants prove that they can be successful in local labour and housing markets before they are approved as migrants. In Australia Fig. 16.13

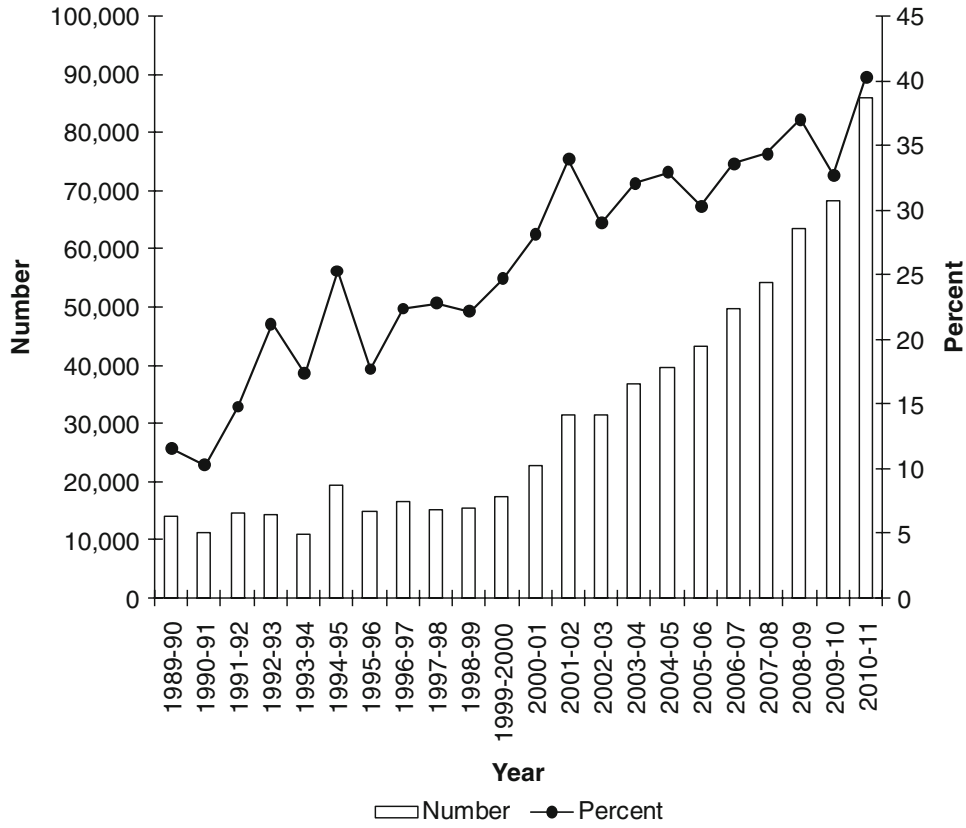

Fig. 16.13 Australia: onshore residence visa grants, 1989–1990 to 2010–2011. Note: From 2009–10 onwards, onshore permanent additions, number and as a percentage of total permanent additions (Source: DIAC Population Flows: Immigration Aspects, various issues)

shows that this part of the migration programme has increased each year and in 2010–2011 there were 85,951 'onshore additions' to the population – 40.3 % of the intake. Asians made up a higher proportion of onshore migrants (43.3 %) than of offshore arrivals (30.7 %). Hence, as Australia moves more toward a system whereby a large proportion of settlers initially enter the country as temporary migrants of one kind or another (as is already the case in New Zealand and the United States) this new pattern is stronger among Asians than among immigrants from other regions. It is also important to point out that skilled migrants are more prominent among Asian onshore settlers than they are among the 'offshore' settler arrivals. Table 16.4 shows that over the 2000–2001 to 2010–2011 period skilled migrants made up 67.3 % of onshore migrants compared with 41.7 % of the offshore permanent arrivals. Hence, the growing onshore component of Australian migration is even more skill focussed than the longstanding offshore settlement part.

The increasing significance of 'onshore' migration is of course a corollary of the increasing scale of non-permanent worker migration discussed earlier. However, it also reflects a change in migration policy making which sees considerable benefit in increasing the balance of offshore migrants since they are more likely to adjust to local conditions, especially the labour market, than their offshore counterparts. This is a

Table 16.4 Australia: visa category of permanent additions, 2000–2001 to 2010–2011 (Source: DIMA Immigration Update, various issues)

	Onshore		Offshore		Total	
Visa category	No.	%	No.	%	No.	%
Skill	368,605	67.3	572,213	41.7	940,818	49.0
Family	142,103	25.9	370,833	27.0	512,936	26.7
Refugee-humanitarian	30,243	5.5	112,009	8.2	142,252	7.4
Other	6,771	1.2	317,334	23.1	324,105	16.9
Total	547,722	100.0	1,372,389	100.0	1,920,111	100.0

function of the fact that they are more likely to have local qualifications and have a greater knowledge of, and experience in, the local labour market and conditions generally. Hence, since 1999 a number of changes in regulations have favoured temporary migrants changing their status to permanent residence. This has included regulations which have made it possible for some foreigners on student visas to gain permanent residence without returning to their origin country.

The pathway from international student to permanent residence is both in the mind of many students when they make the decision to study in Australia (Tan 2012) and in Australian and New Zealand policy makers' thinking. In Australia the increasing numbers of students, especially those from Asia, taking this pathway is evident in Fig. 16.14. The nexus between student migration and eventual permanent settlement is becoming an increasingly important process in skilled migration, not only in Australia but throughout the OECD region.

The link between studying in Australia and eventually permanent settlement is not confined to students seeking permanent residence immediately after completing their studies. The Australian Points Assessment Scheme for selection of skilled settlers now gives extra points for having an Australian qualification so large numbers of former students who studied in Australia and then returned to their origin country have subsequently come back to Australia as settlers. Accordingly, Rizvi (2004, 17) showed that some 55 % of skilled immigrant settlers had an Australian qualification in 2003–2004.

In New Zealand in 2010–2011, 81 % of migrants who were approved for permanent residence had previously held a visitor, study or work permit (Department of Labour 2011). A New Zealand Department of Labour study has shown that migrants who have worked in New Zealand prior to gaining permanent residence have positive employment outcomes after gaining residence (Dunstan et al. 2004).

Recent New Zealand research looking at the pathways international students take through the New Zealand education system to work or permanent residence shows that between 1999–2000 and 2000–2001, 27 % transitioned to work or permanent residence. This study showed that for Chinese students the most common route to permanent residence was through the Skilled/Business stream following a study pathway that included English language and tertiary studies, while students from South Korea, Japan and the USA were more likely to gain permanent residence directly from school (Merwood 2007).

A recent study (Ministry of Business, Innovation and Employment 2012) investigated the subsequent mobility patterns of immigrants who took up residence in New Zealand between 1998 and 2011 and found:

- Some 28 % had left New Zealand for a period of longer than 6 months.
- Skilled migrants are the most likely to leave.
- Some 30 % of those who leave did so in the first 6 months.
- Thirty one percent moved to Australia and 15 % to the UK.
- Some 909,340 New Zealand-born persons left during the period for more than 6 months and a third had returned. Of the remainder, three quarters had settled in Australia.

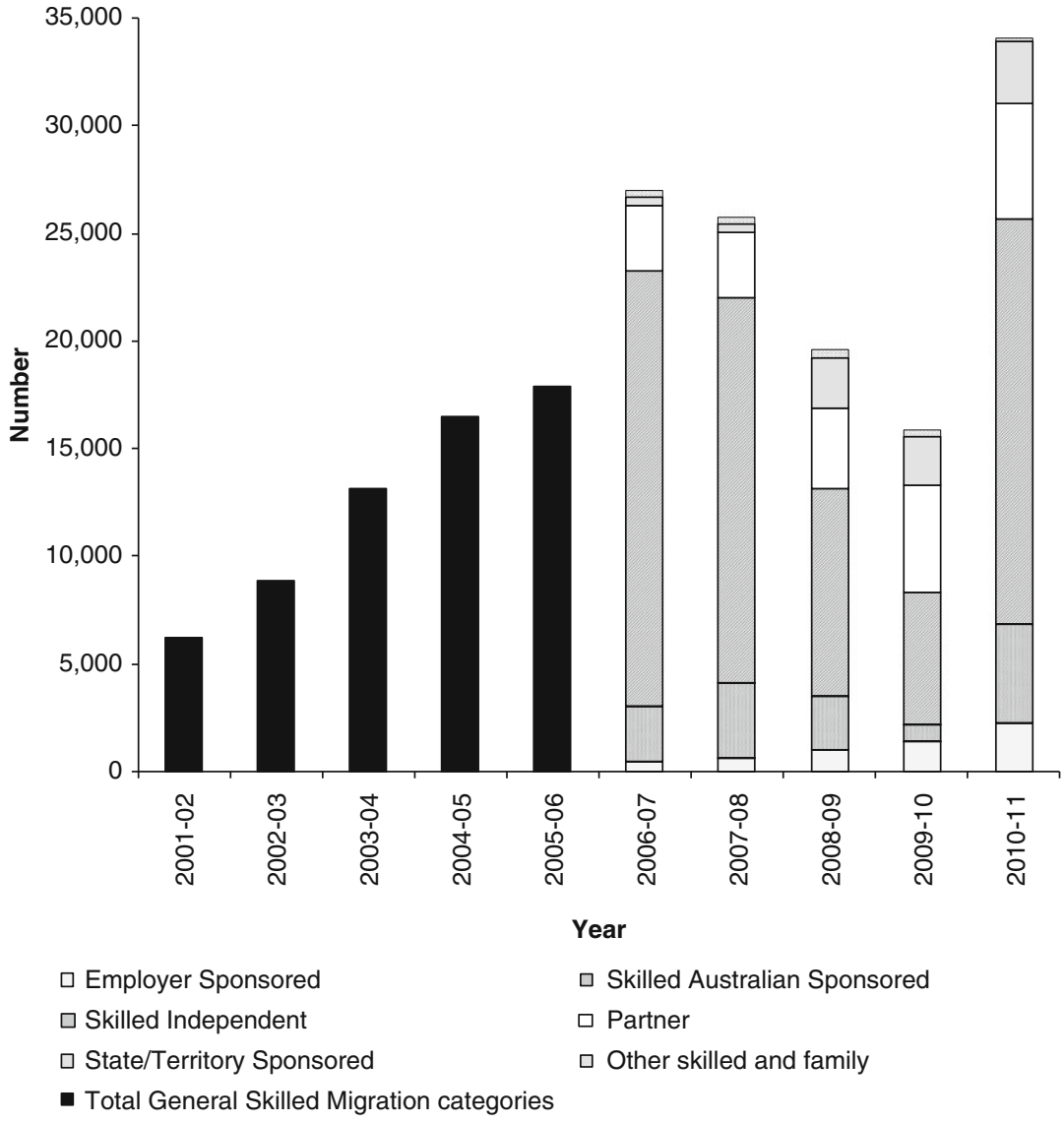

Fig. 16.14 Australia: migration program visa grants to student visa holders, 2001–2002 to 2010–2011 (Source: DIAC Population Flows: Immigration Aspects, various issues; DIAC 2012e)

Some International Migration Issues in Australia and New Zealand

International migration is high on the public policy agenda in both Australia and New Zealand. In Australia debates over immigration and population issues have waxed and waned over more than a century (Hugo 2011). In the most recent federal election campaign (2010) population and immigration were prominent. In both Australia and New Zealand, like Canada, there is strong public support for international migration although Table 16.5 shows that there is stronger opposition to migration in New Zealand than Australia. Markus (2012a) explains that there is some volatility of public opinion on migration in Australia influenced by the scale of the labour market and the prominence of immigration issues in political discourse. He demonstrates this with the diagram shown in Fig. 16.15 which indicates

Table 16.5 Australia: attitude to immigration intake, selected countries, 2003

Number of immigrants coming to country				
	Increase (%)	Remain the same (%)	Combined 'increase' and 'remain the same' (%)	Decrease (%)
Canada	29	39	68	32
Australia	23	38	61	39
Spain	10	39	49	52
Denmark	10	39	49	51
United States	11	32	44	56
Portugal	3	41	44	56
New Zealand	16	28	43	57
Sweden	12	30	42	58
Ireland	9	32	41	59
Austria	7	32	39	61
France	8	26	34	66
Hungary	2	29	31	69
Germany–West	5	24	30	70
Netherlands	4	26	30	70
Norway	7	22	29	71
United Kingdom	6	16	22	78
Russia	4	13	18	83

Source: Markus 2012a, 117

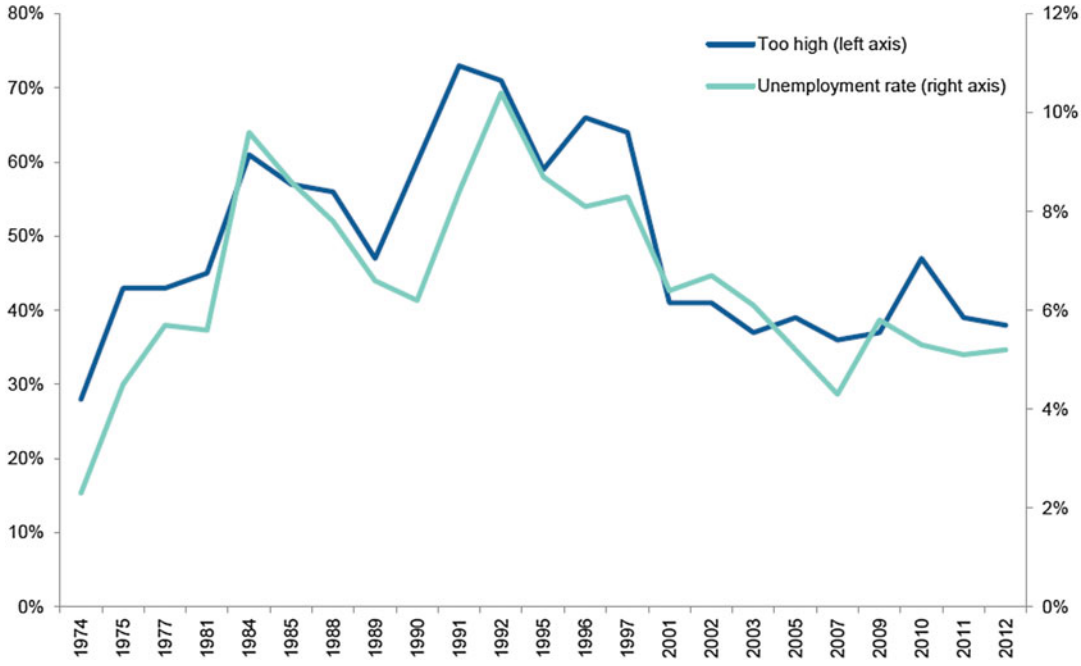

Fig. 16.15 Correlation between unemployment and those of the view that the immigration intake is 'Too High', 1974–2012 (Source: Markus 2012b)

there is a close correspondence between the proportion of Australians believing that migration levels are too high and the unemployment rate.

Most recent policy concern in Australia and New Zealand has centred in shortages of high skill labour. However, strong economic growth since the mid 1990s has translated into strong employment growth, including in recent years among the unskilled/low skilled. Some of the industries that have grown the fastest are highly labour intensive and use a large number of low-skilled workers. Sectors that have contributed to growth include construction and services such as tourism, health, education, wholesale trade and retail trade, and some parts of the horticultural industry. This has already resulted in shortages of low-skill workers in some of these industries.

Looking ahead, there are indications that, alongside the on-going demand for high skill workers, there will continue to be demand for low skilled workers in these types of industries, including caregivers in institutional settings to support an ageing population.

Australia and New Zealand's migration relationship with Pacific Island countries is of particular importance and likely to intensify in the future (Bedford and Hugo 2012). Population growth remains strong in Melanesia and the population is young, poor and mainly rurally based. Currently, unlike many other Pacific nations, the main countries of Melanesia have few outlets for low skilled migration. The World Bank (2006b) has argued that greater labour mobility would expand the employment options available to those living in the Pacific, particularly in Melanesia. But currently such mobility is limited and favours skilled workers. Bedford (2007) has suggested that the most contentious demographic issue confronting Australia and New Zealand in the Pacific in the Pacific during the next half century will be how to cope with pressure for an emigration outlet from Melanesia. He suggests that long term development in Melanesia will depend heavily on opportunities for young people to travel overseas for training and employment.

New Zealand has entered into a special migration relationship with the Pacific, albeit in a limited way. There is a 'Pacific Access Category' which provides limited access to migrants from Tonga, Kiribati, Tuvalu and Fiji, the Samoan quota category and the new Recognised Seasonal Employer Scheme. There is an increasing debate in Australia, however, on the possibility of having a special migration relationship with the Pacific. Understandably this has been strongly influenced by the growing international discourse on migration and development (GCIM 2005; World Bank 2006a; United Nations 2006). The focus in the migration and development literature is largely on what Less Developed origin countries can do to enhance the contribution of their expatriates to economic and social development at home. However, since OECD nations like Australia espouse a wish to encourage and facilitate the progress of less developed nations, it is important to ask whether in destination countries there are some policies and programs relating to migration and the diaspora which can facilitate and enhance their positive developmental impacts in origin areas. There are two particular barriers to destination nations like Australia becoming more 'development friendly' in their immigration policy:

- A strong tradition of immigration policy being conceived in relatively narrow national interest terms.
- The siloization of government policy making and practice which separates immigration and development assistance activities.

Nevertheless in line with the increasing global significance of migration and development discussions, the issue has been raised in Australia. The following issues have been especially prominent (Hugo 2005, 2012):

- Whether Australia should consider modification of its immigration policy and allow temporary migration of particular groups of *unskilled* migrants. Such programs to be focused on neighbouring countries where it

has been shown that remittances can and do have significant positive effects (especially the Pacific and East Timor).
- Whether the impacts of climate change effects on low lying countries needs to be factored into immigration policy. In particular with Pacific nations like Tuvalu being increasingly influenced by rises in sea level, should Australia have a program to relocate Pacific Islanders displaced by the effects of climate change?

Internal Migration

As is the case with international migration, Australia and New Zealand have some of the highest levels of internal migration of any nations along with high quality data which captures it. Along with Canada and the United States, the rate at which their residents move house is more than twice that in other OECD countries (Long 1988, 1991) with around 40 % moving every 5 years and 15–18 % moving annually (Bell 2002). However, New Zealand consistently has had higher levels of mobility than Australia. Over the 2001–2006 period some 54.7 % of New Zealanders changed their place of residence compared with 37.8 % of Australians. Bell (2002, 179) argues one of the factors contributing toward the higher mobility in New Zealand is the higher proportion of the population who are indigenous. Figure 16.16 compares the age specific propensities to move for the two countries and it is apparent that there is a consistent difference across all ages. Both countries show that peak residential mobility occurs in the young adult ages. There is little difference between males and females in the rate of mobility. As Fig. 16.17 shows, in the Australian case, there is a close correspondence of the male and female migration profiles with peak mobility for young women being slightly higher than for males.

There are a number of differentials evident in internal migration in both countries including the following (Bell and Hugo 2000; Statistics New Zealand Internal Migration Report, http://www.stats.govt.nz/browse_for_stats/population/Migration/internal-migration.aspx):

- Migration levels are higher among the Maori in New Zealand and the Aboriginal Torres Strait Islander population in Australia.
- Immigrants initially have higher mobility than the locally born but over time their internal migration converges toward the total population.
- Unemployed persons have higher mobility than employed persons.
- Separated and divorced persons move more than the married and never married.
- People living in group households, flats and rented dwellings are more mobile.
- People with higher levels of education are more mobile.
- Persons working in agriculture have the lowest level of mobility.

There are a number of key characteristics of internal migration in Australia and New Zealand which influence its demographic, social and economic impact.

- Most mobility occurs over short distances – occurring within labour market areas, especially within large cities.
- There is a very low rate of migration effectiveness which compares gross migration with net migration and indicates the extent to which migration leads to a shift in population distribution.

One of the impacts of these two characteristics is that the overall structure of the distribution of the population has changed. Hence in discussing Australia's population distribution, one is confronted with a striking paradox of mobility and stability. On the one hand Australians are the most mobile society in the contemporary world. The 2006 census indicated that 16.8 % of Australians had moved their permanent place of residence in the last year and 45.5 % in the last 5 years. Moreover, 23.9 % of the Australian population was born in another

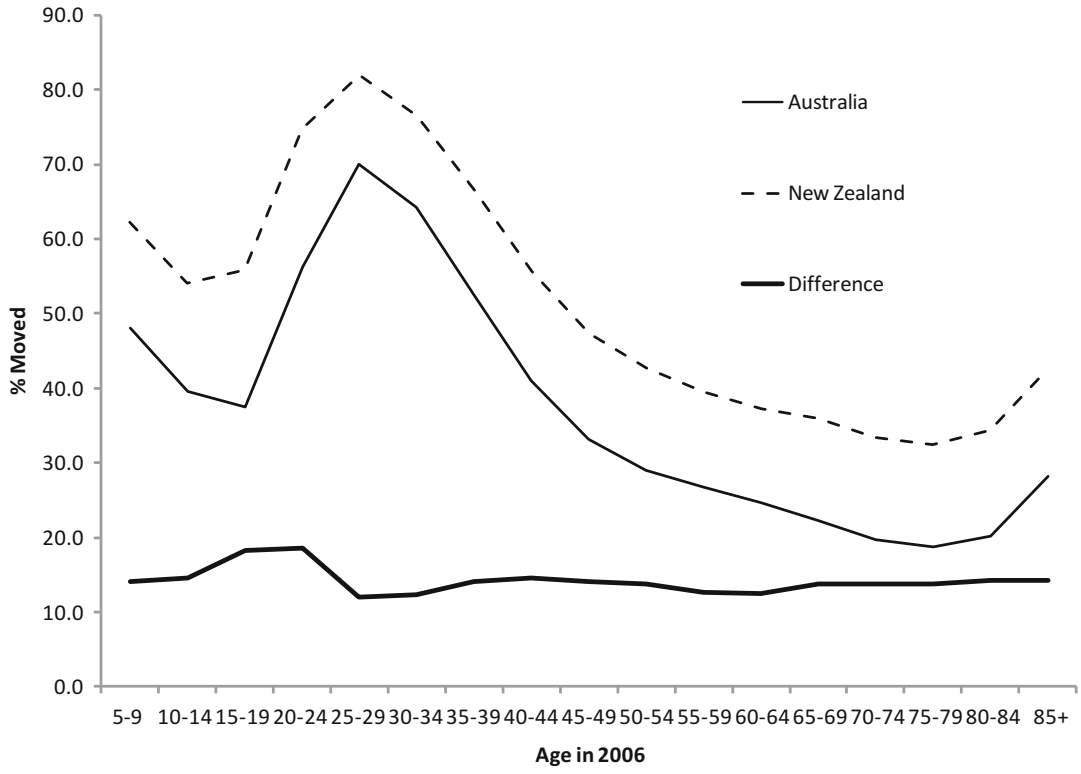

Fig. 16.16 Australia and New Zealand: percent moved 2001–2006 (Source: ABS 2006 Census and New Zealand Census 2006)

country, the highest proportion for any middle-sized or large country. In addition, at any one time there are almost one million foreigners in Australia on some form of temporary visa; and about one million Australians reside abroad. Hence the Australian population is one of the most residentially mobile in the world.

On the other hand, there has been a great degree of stability in the overall spatial structure of the national population distribution. About a century ago the geographer Griffith Taylor (Powell 1984, 87) argued that the structure of Australian population distribution had been fixed by the 1870s and his argument is still substantially sound. Figure 16.18 shows the centre of gravity of the Australian population since 1861 and indicates that it has moved very little over the subsequent 150 years. Despite massive population growth the basic structure of the spatial distribution of the population has remained fairly stable. This is in contrast to the United States where there has been significant westward and southward shift in the centre of gravity of the population distribution over the same period (Plane and Rogerson 1994).

Moreover, despite a popular narrative of massive internal migration from non-metropolitan to metropolitan areas, there is also a high degree of stability in the proportions of the national population living in metropolitan, other urban and rural areas. Figure 16.19 indicates that there has been relatively little change over the last few decades in the proportions of the national population living in the three main sections of state categories identified by the ABS.

As well as being relatively stable, the Australian population distribution and settlement system are distinctive. Figure 16.20 shows the spread of population across Australia is quite uneven involving:

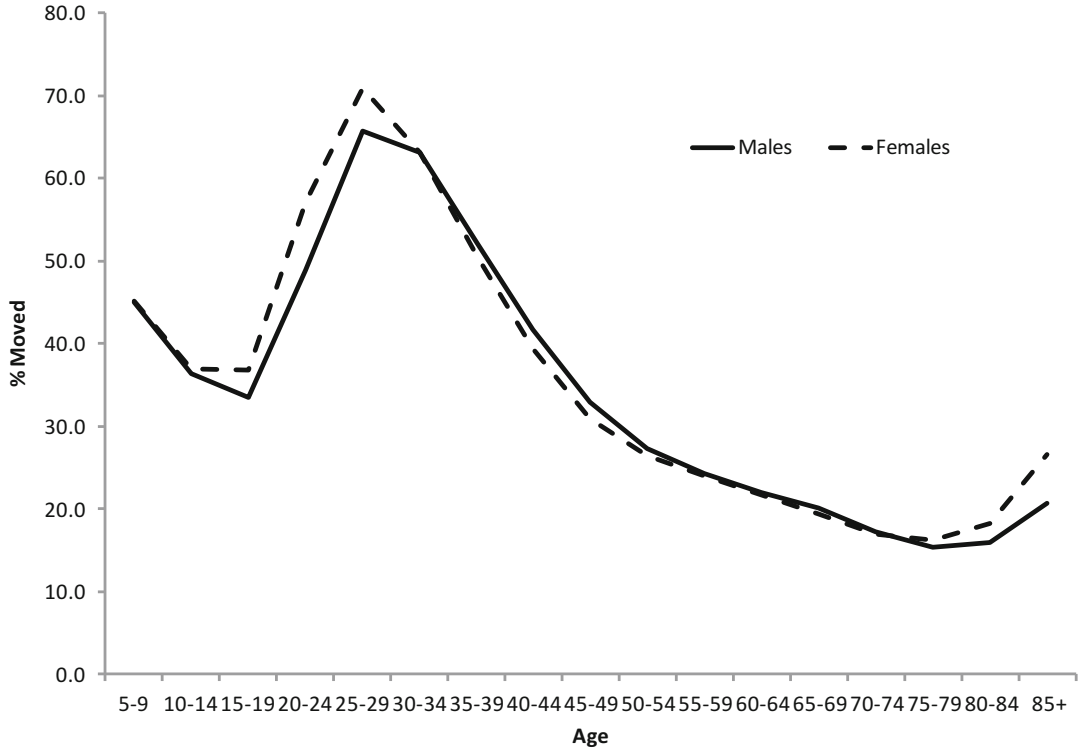

Fig. 16.17 Australia: percent moved by sex, 2006–2011 (Source: ABS 2011 Census)

- A low population density of two persons per km^2
- A high level of urbanisation – 87 % live in urban areas
- A concentration within capital cities – 64 %
- A strong coastal orientation with 81 % living within 50 km of the coast
- An uneven density – 76 % of the people live on 0.33 % of the land area with a density of 100 persons or more per km^2 while 0.8 % of the population live on 70.5 % of the land area at a density of 0.1 persons or less per km^2

While there are some differences between states and territories in fertility and mortality, most of the differences in population growth are a function of variations in internal and international migration. With respect to different rates of population growth between the states and territories, Table 16.6 indicates that there have been quite distinctive mixes of natural increase, net internal and net interstate migration shaping the population growth in the states and territories since 2001. For New South Wales there has been a consistent pattern of net internal interstate migration loss. Over the period 1996–2009, 316,185 more persons left NSW for other states than moved into it. However, this was more than counterbalanced by the fact that 792,586 more people moved into the state from overseas than left to live in another country. Net international migration to the state is now a greater component of growth than natural increase. After NSW, which is overwhelmingly the major net migration loser in terms of interstate migration, South Australia has the second largest net loss (56,999).

In South Australia the net gain by overseas net migration in 1996–2001 was not enough to counterbalance the net interstate migration loss; however, since 2001 there has been a recovery of international migration to that state, with a net gain of 99,387 compared with net interstate loss of 31,049 interstate over that time. Hence in that state until recently, natural increase has been the

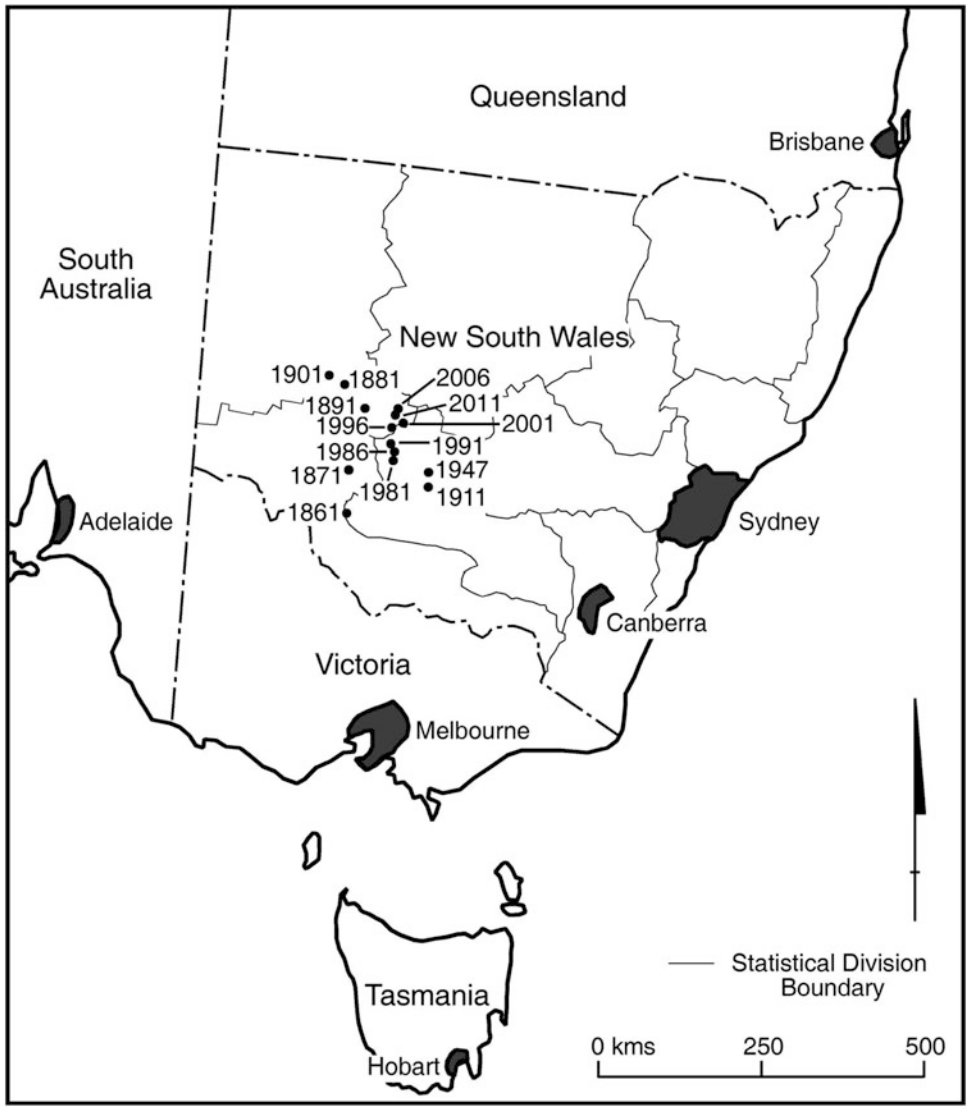

Fig. 16.18 Australia: centre of gravity of population, 1861–2011 (Source: Calculated from ABS Censuses and ABS Regional Population Growth, Australia, various issues)

major component in population growth (which was slow).

The pattern in Victoria is different again. After experiencing small net interstate migration gain in 1996–2001, a small loss was recorded in 2001–2006. However, international migration has increased substantially and has become larger than natural increase. In Queensland over the 1996–2006 period, net interstate migration gain was the largest contributor to population growth. However, more recently international migration has had increasing significance in Queensland's population growth, accounting for half of growth in the 2006–2010 period. It is interesting that since 2001 Queensland has not only been the fastest growing state but for the first time the numerical increase in the state's population has been greater than that in NSW. Western Australia has been second only to Queensland in net interstate migration gains but

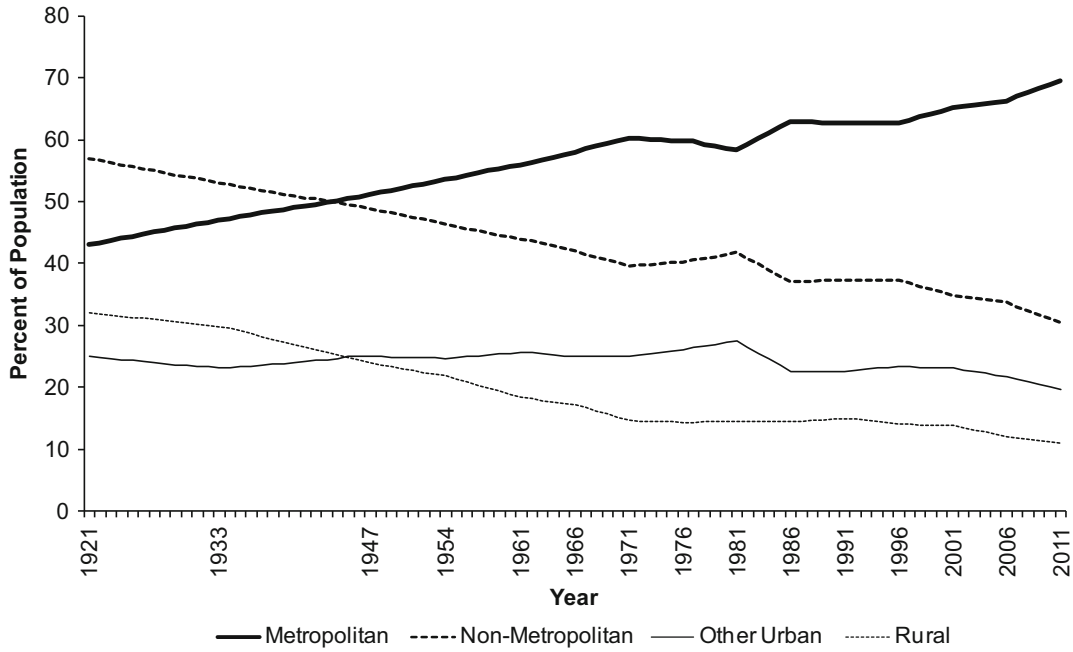

Fig. 16.19 Australia: changing distribution of the population between urban and rural sectors, 1921–2011 (Source: Australian Censuses, 1921–2011)

international migration has been an important contributor to population growth throughout the entire postwar period in that state (Hugo 2007).

Turning to the capital cities, which house almost two thirds of the Australian population, Table 16.7 shows the estimated components of growth in the most recent intercensal period for the five largest cities. During the first two postwar decades, net migration gains from elsewhere in Australia were only minor elements in the massive growth experienced by the nation's two largest cities, dwarfed by the net gain of immigrants from overseas, which accounted for more than half of this expansion. During the 1976–1996 period, however, a quite different pattern was in evidence, with a substantial net internal migration loss being recorded in both large cities, although international migration remained an important source of growth, especially in Sydney.

Some differences are evident in the most recent decade. In 1996–2001 there was a reduced net loss in Sydney, perhaps associated with the growth created by the 2000 Olympic Games. Since then, however, the massive net interstate migration losses have resumed. In Melbourne there were small net interstate migration gains in 1996–2001 but a net outmigration of 18,000 in 2001–2006. Hence Sydney, and to a much lesser extent Melbourne, have been important *sources* of internal migrants to the rest of Australia while the fact that international migrants have disproportionately settled in Australia's two largest cities has been the major migration driver of their growth.

Unlike Sydney and Melbourne, the three other mainland state capitals recorded significant net internal migration gains in the first two postwar decades, especially in the case of Brisbane. International migration gains were substantially larger than internal gains in Adelaide and Perth but equivalent in size in Brisbane. In the 1976–1986 period, however, the impact of structural change in the economy on manufacturing

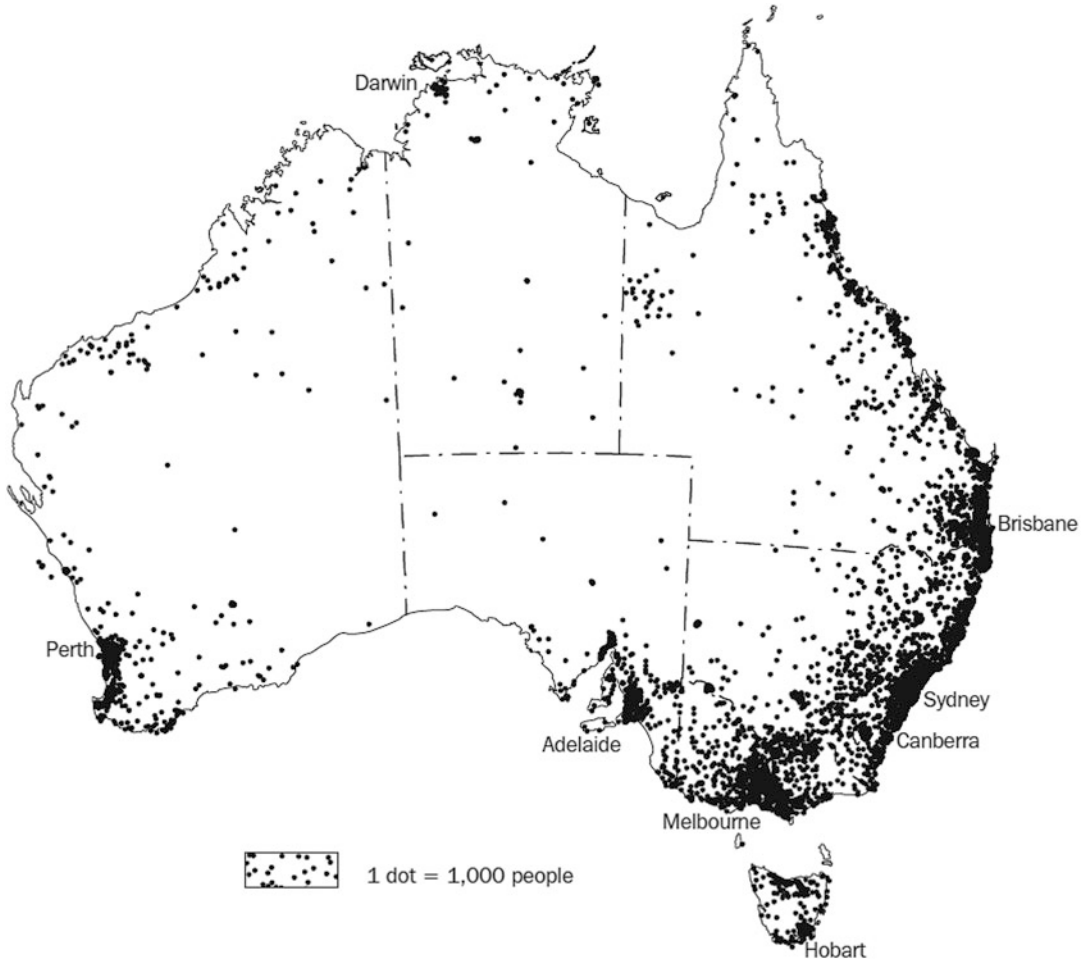

Fig. 16.20 Australia: distribution of the total population, 2006 (Source: ABS 2008, 192)

saw Adelaide's rate of growth fall from being much higher than that in Brisbane and Perth in 1947–1966 to being less than half of the rate in the other two cities. During the 1986–1991 intercensal period, however, Brisbane was the most rapidly growing city and the major element in this growth was net internal migration gains. Perth, on the other hand, grew less quickly and recorded a small net loss of migrants to other parts of Australia but had a major net gain of overseas-born migrants – a gain two and a half times larger than that of Brisbane. There was thus a distinctive difference in the net migration gains being recorded by Australia's fastest growing capitals, with internal migrants being prominent in Brisbane and overseas-born being overwhelmingly dominant in Perth. In Adelaide there was a small internal migration gain between 1986 and 1991 and a more substantial net gain of overseas migrants which accounted for a quarter of the modest growth recorded by the southern capital.

In the most recent intercensal period it will be noticed that Perth and Brisbane have continued to experience growth from internal migration, especially Brisbane, which is a major *sink* of internal migration in Australia. Adelaide, however, like all of South Australia has had a significant net loss due to internal migration.

Table 16.6 Australian states and territories: natural increase. Net overseas migration, net interstate migration and total population growth, 2001–2006

State/territory	Natural increase		Net overseas migration		Net interstate migration		Total population Growth
	Number	Percent of growth	Number	Percent of growth	Number	Percent of growth	
New South Wales	191,089	79	192,582	79.6	−139,330	−56.3	241,965
Victoria	143,880	44.5	142,892	44.2	−2,197	−0.7	323,584
Queensland	132,050	28.5	129,944	28.1	164,362	35.5	462,600
South Australia	28,179	49.9	27,522	48.7	−12,639	−22.4	56,476
Western Australia	68,668	43.5	82,832	52.5	−1,399	−0.9	157,886
Tasmania	10,026	58.5	3758	21.9	3,105	18.1	17,137
Northern Territory	13,862	107.4	3,475	26.9	−8,474	−65.7	12,906
Australian Capital Territory	13,531	90.8	2,412	16.2	−6,428	−43.1	14,908
Australia[a]	601,389	46.7	585,421	45.4			1,288,248

Source: ABS 2001, 2002, 2007
[a]Includes other territories

Table 16.7 Sydney, Melbourne, Brisbane, Perth and Adelaide: estimated components of population change, 2001–2006

		Natural increase	Net international migration	Net internal migration	Total migration	Total population increase
Sydney	000 s	159	84	−121	−37	122
	Percent	130.3	68.9	−99.2	−30.3	100
Melbourne	000 s	121	124	−19	105	226
	Percent	53.5	54.9	−8.4	46.5	100
Brisbane	000 s	66	27	43	70	136
	Percent	48.5	19.9	31.6	51.5	100
Perth	000 s	49	53	3	56	105
	Percent	46.7	50.5	2.9	53.3	100
Adelaide	000 s	21	22	−10	12	33
	Percent	63.6	66.7	−30.3	36.4	100

Source: ABS unpublished data

International migration has increased in significance in Brisbane and retained its importance in Perth.

Table 16.8 presents data on the contribution of intrastate and interstate migration to the population growth in the metropolitan and non-metropolitan sectors of the Australian states. The data have to be interpreted carefully because of some boundary changes to metropolitan areas over the 35 year period depicted (Bell 1995, 75), but some interesting patterns are shown. The table sheds useful light on the commonly held perception that there is a 'drift' to the capital cities of Australia from non-metropolitan areas. It will be noted that for all capital cities, with the exceptions of Perth and Hobart, more people moved from the capital to non-metropolitan parts of the state during the 2001–2006 period, than vice versa. Sydney has lost population to intrastate locations during every intercensal period from 1966, while for Melbourne there has been a 'drift' to rural areas from the capital

Table 16.8 Net interstate and intrastate migration, capital city statistical divisions and non-metropolitan areas, six states, Australia, 2001–2006

State	Metropolitan			Non-metropolitan			Metropolitan share of interstate gain or loss (percent)
	Intrastate	Interstate	Total	Intrastate	Interstate	Total	
New South Wales	−54,504	−66,508	−121,012	54,504	−37,078	17,426	64.2
Victoria	−15,996	−2,713	−18,709	15,996	−5,005	10,991	35.2
Queensland	−1,633	44,383	42,750	1,663	76,575	78,208	36.7
South Australia	−3,359	−6,252	−9,611	3,359	−1,477	1,882	80.9
Western Australia	1,693	1,569	3,262	−1,693	−1,199	−2,892	424.1
Tasmania	2,527	−162	2,365	−2,527	4,835	2,308	−3.5

Source: Bell and Hugo 2000, 96; ABS 2001 Census (unpublished data), 2006 ABS TableBuilder

since 1971. Brisbane has oscillated between situations of rural-urban and urban-rural drift, while South Australia experienced urban-rural drift for the first time during the 2001–2006 period. In WA and Tasmania, the typical situation has been rural to urban movement, although at levels substantially lower than the losses experienced by Sydney, in particular, and Melbourne. The losses to other parts of the state are particularly significant in Sydney, and to a lesser extent, Melbourne. It is notable in Sydney and Melbourne too that these patterns are consistent over much of the post war period, although they were especially marked in 2001–2006. The metropolitan to non-metropolitan flow in internal migration has significant implications for discussions of changing Australian settlement systems.

Sydney also had a substantial net migration loss to other states as well as to other parts of NSW. Melbourne, Adelaide and Hobart had smaller net losses to other states while Brisbane, and to a lesser extent Perth, had a net gain of interstate migrants.

Turning to non-metropolitan areas, the areas that experienced the most significant net internal migration gains were coastal areas and those areas adjoining metropolitan areas. Such locations in Queensland, NSW and Victoria are especially important magnets for internal migrants.

The New South Wales pattern of net migration has a quite distinctive spatial pattern which is present also in the other states. It is apparent that net international migration gain plays a much lesser role in the growth of population in non-metropolitan areas, even in those that are experiencing significant expansion. This is evident in Table 16.9, which shows for the state of New South Wales the in, out and net migration for 1996–2006 in Sydney and three non-metropolitan zones parallel to the coast together with the number of immigrants who arrived between 1996 and 2001 and 2001 and 2006. In the growing coastal non-metropolitan areas there were 35,745 recent immigrants but 396,668 immigrants had moved in from elsewhere in Australia and there was a net internal migration gain of 64,546. The pattern of net internal migration loss increases with distance from the coast and the number of recent immigrants decreases. This mix of interstate and international migration contribution to growth is indicative of patterns across Australia.

Conclusion

Australia and New Zealand are among the world's most mobile societies. Moreover, the high quality of their migration data, especially from an international migration perspective, means that they can provide insights into migration processes which can be useful not only to their own policy makers but in the development of more equitable and effective migration policy

Table 16.9 New South Wales: regions, internal migration 1996–2006 and immigrants who arrived in Australia between 1996 and 2006

	Internal migration 1996–2001			Internal migration 2001–2006			Immigrants arrived	
Region	In	Out	Net	In	Out	Net	1997–2001	2001–2006
Sydney	175,732	233,685	−57,953	122,179	243,191	−121,012	173,083	196,212
Coastal NSW	189,277	158,174	31,103	207,391	173,948	33,443	12,066	16,897
Central NSW	91,899	95,028	−3,129	71,833	86,971	−15,138	3,088	4,409
Western NSW	40,489	66,292	−25,803	19,733	20,612	−879	643	771

Source: Unpublished data from 2001 Australian Census, TableBuilder 2006

globally. In particular, the fact that their data indicates emphatically that international migration is multidirectional rather than south-north and hence has the potential to deliver dividends to both origin and destination is important. Australia and New Zealand migration research can be a laboratory for improving our understanding of migration processes more generally.

As high income countries on the edge of the rapidly developing Asia-Pacific region, they have the potential to play an important role in reducing poverty and assisting sustainable development in that region. Migration can play a small, but nevertheless significant, part in this (Hugo 2012). However, for this potential to be realised will require innovative policy development which considers not only national self interest but wider issues of regional and global sustainable development.

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Migration in Europe

17

James Raymer

Introduction

Europe is a diverse and unique area of the world. According to the United Nations, it is comprised of 45 countries, including Russia but not Turkey. Arguably, nowhere else in the world is there such a diverse and varied set of countries, let alone migration patterns. Countries in Eastern Europe are facing population decline from very low and sustained fertility levels and net emigration, while many populations in Western Europe are increasing due to net immigration. Europe also contains the European Union (EU) and the European Free Trade Association (EFTA) with 31 member countries having the right of free movement within the system. Some 3–6 million migrants each year are transferred to these countries from other member countries and across the world (Raymer et al. 2013).

The aims of this chapter are to provide a sense of the diversity and importance of migration to and within Europe. Because of the high standards of living and social infrastructure, Europe attracts migrants from all over the world. This is important because nearly all European countries are faced with shortages in their labour force due to sustained low fertility and high life expectancy.

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Europe is ideal for studying migration. First, there is a relative abundance of migration data for a large group of countries in close proximity, and these data are improving over time. In 2007, the European Parliament passed a regulation (No. 867) on setting a minimum level of data to be provided and by requiring countries to report harmonised migration statistics to the best of their ability. Second, Europe is also interesting because of the existence of the EU and EFTA, which gives around 500 million persons with different languages and cultures the right to freely migrate and integrate across 31 countries.

After presenting a general overview of the context in which migration has evolved in Europe, harmonised estimates of migration flows obtained from the recently completed Integrated Modelling of European Migration (IMEM) project are presented. The analysis focuses on the 31 countries in the EU and EFTA from 2002 to 2008. The chapter ends with a discussion of the future prospects of migration for this region of the world.

Background

There have been many recent studies on European migration (e.g., Bade et al. 2011; Bonifazi 2008; Castles and Miller 2009; Dustmann and Frattini 2011; Salt 2005; Schierup

M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_17

et al. 2006) and is impossible to summarise all of it in one chapter. Thus, in this section, a basic review of this literature is presented to provide readers with a general picture of European migration and the key issues. Note, although this chapter focuses on international movements amongst countries in Europe, within country movements are also very important for shaping population change in Europe, particularly with regard to the processes of urbanisation and counterurbanisation (see, e.g., Rees et al. 1996).

A Brief Review of Migration Patterns from 1945 to 2000

As described in Martin and Widgren (2002) and Bonifazi (2008), there have been four main stages of European migration since World War II. The first stage began with the movements that occurred during and after the War, where millions of people were displaced or forcibly moved. It is estimated that between 1945 and 1950, some 15 million persons moved from the Eastern Europe to Western Europe and 4.7 million moved in the opposite direction (Bonifazi 2008, p. 113), representing the most dramatic period of migration in European history (Haywood 2008, p. 240).

The second stage represents the 'golden' period of labour migration from the late 1940s to the early 1970s. During this time, many countries in Europe recruited labour from former colonies, Southern Europe and countries on the periphery of Europe. Also, several countries used 'guest worker' policies in attempts to restrict the employment and settlement patterns of migrants. Castles and Miller (2009) describe key differences between colonial workers, who received preferential entitlement, generally had civil and political rights and were expected to stay permanently, and guest workers, who were considered temporary with restricted rights. In both cases, the migrants became ethnic minorities and were concentrated in low-skilled manual work, substandard housing and poor social conditions. However, the more favourable conditions of colonial migrants allowed them to integrate more successfully over time. The United Kingdom and Germany represented two stereotypical examples of the 'colonial' worker and 'guest worker' schemes, respectively. In 1947, the first West Indians arrived in Britain. These migrants were followed by migrants from India and then Pakistan (Hatton and Price 1999). In 1955, Germany signed its first guest worker agreement with Italy. Further agreements followed with Spain and Greece (1960), Turkey (1961 and 1964), Morroco (1963), Portugal (1964) and Yugoslavia (1968).

The third stage of European migration began when Western European countries stopped recruiting migrants, encouraged return migration of foreigners, and passed a variety of restrictive policies on migration after the oil crises in 1973–1974 (Bonifazi 2008; Boswell 2003; Castles and Miller 2009). It was also a time when Europe began to transition from being a primarily manufacturing economy to a service economy. Migrants that came to Europe during this period came primarily for family reunion. There were also increased numbers of illegal migrants, asylum seekers and skilled migrants. In Southern Europe, for the first time, countries began to receive large numbers of immigrants, who were able to take advantage of the ineffective government systems and legalisation programs (Cangiano 2008).

The fourth and most recent stage began with the fall of the Berlin Wall in 1989 and the enlargement of the EU system. Mass emigration movements occurred due to the collapse of the Soviet Union, Yugoslavia and Czechoslovakia. Between 1990 and 1997, it is estimated that around 50 % of immigrants to Western Europe came from this area. During this stage, Poland, Hungary and the Czech Republic became attractive destinations. Also, the increasing numbers of asylum seekers became an important issue, with EU and EFTA[1] member countries working together to agree on a set of unified policies to

[1] The EFTA countries are Iceland, Liechtenstein, Norway and Switzerland.

control and restrict these movements (Martin and Widgren 2002; Van Wissen and Jennissen 2008).

In 1993, the Maastricht Treaty established the EU with 12 member countries.[2] Austria, Finland and Sweden became members in 1995. In 2004, ten more countries[3] became members, followed by Bulgaria and Romania in 2007. The combined population size of the 12 most recent members is around 100 million out of a total EU population of around 500 million. Excluding Cyprus and Malta, these countries had average incomes that were only 23 % of the EU average when they joined the EU, and 35–45 % if cost of living was included.

Not all countries in Europe welcomed the free movement of labour from the new member countries. Aside from Ireland, the United Kingdom and Sweden, EU member states placed restrictions on the movements for up to 7 years. As a result, there were huge increases in the migration from the new member countries to Ireland and the United Kingdom, and to a lesser extent, Sweden.

The Pressures of Demographic Ageing

Countries in Europe are characterised by persistently low fertility and high life expectancy (Eurostat 2009, pp. 127). The result is an ageing population and a declining workforce. Most countries in Europe are projected to either decline in population size or to have a very small increase. For instance, the whole of the EU, comprising of 27 countries, is projected to increase from 495 million in 2007 to 506 million in 2060, an increase of only 2 % over a period of 53 years (Eurostat 2009, pp. 137). Most of this population increase is likely to come from net international migration from countries outside Europe. While migration may alleviate some of the problems associated with population decline, it will not stop the demographic processes of ageing (Coleman 2008; Van Nimwegen and Van der Erf 2010). The proportion elderly (65 years and over) is expected to increase from 16.9 % in 2007 to 29 % in 2060.

Foreign Populations in Europe

Data on foreign population stocks from the United Nations are analysed in this section for the purpose of understanding the relative importance and heterogeneity of migrant populations in countries throughout Europe.

According to the United Nations 'Trends in International Migrant Stock' database,[4] the number of international migrants, i.e., those born outside their country of birth, in Europe rose from 49.4 million in 1990 to 69.8 million in 2010, representing a 41 % increase. The percentage foreign-born increased from 6.9 % in 1990 to 9.5 % in 2010. The average for the world was 3.1 % in 2010. In comparison to other major regions in the world, only Northern America and Oceania were higher with 14.2 % and 16.8 %, respectively. However, the sizes of their foreign-born populations were considerably smaller with 50.0 million in Northern America and 6.0 million in Oceania.

The numbers and percentages of migrant stocks are presented for all countries in Europe in Table 17.1. On average for 2010, the percentage foreign-born are highest in Western Europe[5] (12.4 %), followed by Northern Europe[6] (10.7 %), Southern Europe[7] (9.4 %) and Eastern Europe[8]

[2] Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, The Netherlands, Spain and the United Kingdom.

[3] Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

[4] http://esa.un.org/MigAge/ (accessed 1 August 2012).

[5] Austria, Belgium, France, Germany, Luxembourg, The Netherlands and Switzerland.

[6] Channel Islands, Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden and United Kingdom.

[7] Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Spain and The former Yugoslav Republic of Macedonia.

[8] Belarus, Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine.

Table 17.1 The number and percentage of migrant stocks in Europe, 1990, 2000 and 2010

		Estimated number of migrants (in thousands)			International migrants as a % of population		
Region	Country	1990	2000	2010	1990	2000	2010
Eastern	Belarus	1249	1124	1090	12.2	11.2	11.4
	Bulgaria	22	101	107	0.2	1.3	1.4
	Czech Republic	424	453	453	4.1	4.4	4.4
	Hungary	348	297	368	3.4	2.9	3.7
	Poland	1128	823	827	3.0	2.1	2.2
	Republic of Moldova	579	474	408	13.3	11.6	11.4
	Romania	143	134	133	0.6	0.6	0.6
	Russian Federation	11,525	11,892	12,270	7.8	8.1	8.7
	Slovakia	41	118	131	0.8	2.2	2.4
	Ukraine	6893	5527	5258	13.4	11.3	11.6
Northern	Channel Islands	40	63	75	28.3	42.6	49.9
	Denmark	235	371	484	4.6	7.0	8.8
	Estonia	382	250	182	24.4	18.2	13.6
	Finland	63	134	226	1.3	2.6	4.2
	Iceland	10	16	37	3.8	5.7	11.3
	Ireland	228	385	899	6.5	10.1	19.6
	Latvia	646	430	335	24.3	18.1	15.0
	Lithuania	349	212	129	9.4	6.1	4.0
	Norway	195	299	485	4.6	6.7	10.0
	Sweden	778	993	1306	9.1	11.2	14.1
	United Kingdom	3716	4790	6452	6.5	8.1	10.4
Southern	Albania	66	77	89	2.0	2.5	2.8
	Bosnia and Herzegovina	56	96	28	1.3	2.6	0.7
	Croatia	475	616	700	10.5	13.7	15.9
	Greece	412	732	1133	4.1	6.7	10.1
	Italy	1428	2122	4463	2.5	3.7	7.4
	Malta	6	9	15	1.6	2.3	3.8
	Montenegro	0	0	43	0.0	0.0	6.8
	Portugal	436	635	919	4.4	6.2	8.6
	Serbia	99	857	525	1.0	8.5	5.3
	Slovenia	178	174	164	9.2	8.8	8.1
	Spain	830	1753	6378	2.1	4.4	14.1
	F. Yugoslav R. Macedonia	95	126	130	5.0	6.2	6.3
Western	Austria	793	997	1310	10.3	12.4	15.6
	Belgium	892	879	975	9.0	8.6	9.1
	France	5897	6279	6685	10.4	10.6	10.7
	Germany	5936	9981	10,758	7.5	12.2	13.1
	Luxembourg	114	141	173	29.8	32.2	35.2
	Netherlands	1192	1585	1753	8.0	10.0	10.5
	Switzerland	1376	1563	1763	20.5	21.8	23.2

Source: United Nation's 'Trends in International Migrant Stock' database

(7.1 %). The countries with the largest numbers of migrants are those with the largest population sizes (i.e., France, Germany Italy, Russian Federation, Spain, Ukraine and United Kingdom). Over time, Spain exhibited the largest increase in its foreign-born population, from 830 thousand in 1990 to 6.4 million in 2010. Foreign-born populations for many countries in Eastern Europe

declined during this time, though one should keep in mind that these migrants are largely an artefact of the breakup of the former Soviet Union.

In terms of percentage foreign-born, the countries with the largest shares in 2010 were the Channel Islands (50 %), Luxembourg (35 %), Switzerland (23 %) and Ireland (20 %). Again, Spain exhibited the largest increase from 2 % foreign-born in 1990 to 14 % in 2010. Latvia's foreign-born population, on the other hand, decreased from 24 % in 1990 to 15 % in 2010. Overall, for countries in the Northern, Southern and Western regions of Europe, there were steady increases in the proportions of foreign-born.

Official Statistics and Harmonised Estimates of International Migration Flows in Europe

Official Statistics[9]

Reported statistics on migration can be confusing or nonexistent. There are two main reasons.

First, no consensus exists on what exactly is a 'migration'. Therefore, comparative analyses suffer from differing national views concerning the definition of a migrant. Second, the event of migration is rarely measured directly. The challenge is compounded because countries use different methods for data collection. Migration statistics may come from a variety of administrative registers, censuses or surveys.

The timing criterion used to identify international migrants in Europe varies considerably between countries. For population register data, international migration may refer to persons who plan to live, or have lived, in a different country for no minimum period, 3 months, 6 months, 1 year, or even more. For example, in the German register there is no time criterion, i.e., everyone who enters the country not for the purposes of tourism or business is obliged to register and is counted as an immigrant. On the other hand, in Poland, immigrants are those who become registered for permanent stay.

International migration statistics also suffer from reliability problems, mainly due to under-registration of migrants and imperfect data coverage (Nowok et al. 2006; Willekens 1994). Under-registration is often caused by non-participation. Emigration data are particularly problematic because migrants may not notify the population register of their movement because it is not in their interest to do so. Surveys, such as the United Kingdom's International Passenger Survey, often do not have large enough sample sizes to adequately capture the details needed for analysing migration (De Beer et al. 2010). Finally, data on flows for certain countries may be missing for particular years or entirely.

To overcome the problems of inconsistent migration data, there are two possible solutions. First, national statistical offices in different countries could communicate with each other. The best international migration data in the world come from the Nordic population registers. What is unique about these registers is that, not only do Denmark, Finland, Iceland, Norway and Sweden all have excellent and well-developed population registers; they exchange information on international migrants. They do this by notifying the sending country when someone from another Nordic country has registered on their system. Therefore, a person can only be included on one population register at a time. All other national statistical offices in the world rely on their own systems and measures to track migration flows from and to their country, resulting in inconsistencies and inaccuracies for the user community.

The second option is to use statistical models to reconcile the different reported figures on migration and to estimate the missing data. Since 2007, there have been two international and interdisciplinary research projects on modelling migration flows in Europe. The first project, MIgration MOdelling for Statistical Analyses (MIMOSA), was funded by Eurostat from January 2007 to December 2009 (see De Beer et al. 2010 and Raymer et al. 2011). The second project, Integrated Modelling of European Migration (IMEM), was funded by

[9] This section draws from Raymer et al. (2013) and Raymer (2012).

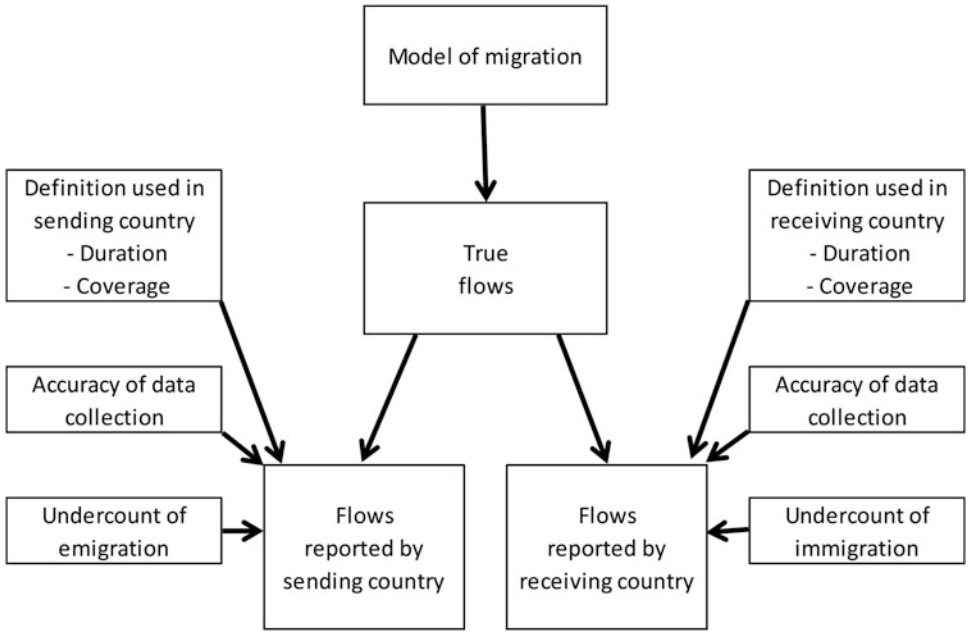

Fig. 17.1 Conceptual framework for modelling migration flows

New Opportunities for Research Funding Agency Co-operation in Europe (NORFACE) from November 2009 to April 2012 (see Raymer et al. 2013). The IMEM project, introduced in the following subsection, extended the MIMOSA project greatly by modelling the measurement aspects of data, incorporating expert information, and including measures of uncertainty.

Harmonised Estimates[10]

The IMEM approach to harmonizing and estimating migration flows differs from previous attempts (Cohen et al. 2008; Raymer 2008; Abel 2010; De Beer et al. 2010; Raymer et al. 2011) by the emphasis on modelling the measurement aspects of the reported statistics and by providing measures of uncertainty for all flows and parameters in the model. The conceptual framework of the model developed for the IMEM project is presented in Fig. 17.1. The interest is in estimating a set of unobserved true flows of migration based on four pieces of information: flows reported by the sending country, flows reported by the receiving country, covariate information and expert judgments. The reported data are harmonized via two measurement models: one for sending country data and one for receiving country data. These models distort the true flows by taking into account duration definitions used in various countries, relative accuracy of the data collection mechanisms, the overall undercount of migration and coverage. Expert judgements are also used to inform the measurement model.

In terms of measurement, harmonised flows are consistent with the United Nations (1998, p. 18) recommendation for long-term international migration, i.e., a long-term migrant is "a person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residence." Finally, a migration model based on theory is used to augment the measurement model and to estimate the missing flow data. For full details on the IMEM model specification and elicitation of expert judgements, refer to Raymer et al. (2013) and Wiśniowski et al. (2013), respectively.

[10] This section draws from Raymer et al. (2013).

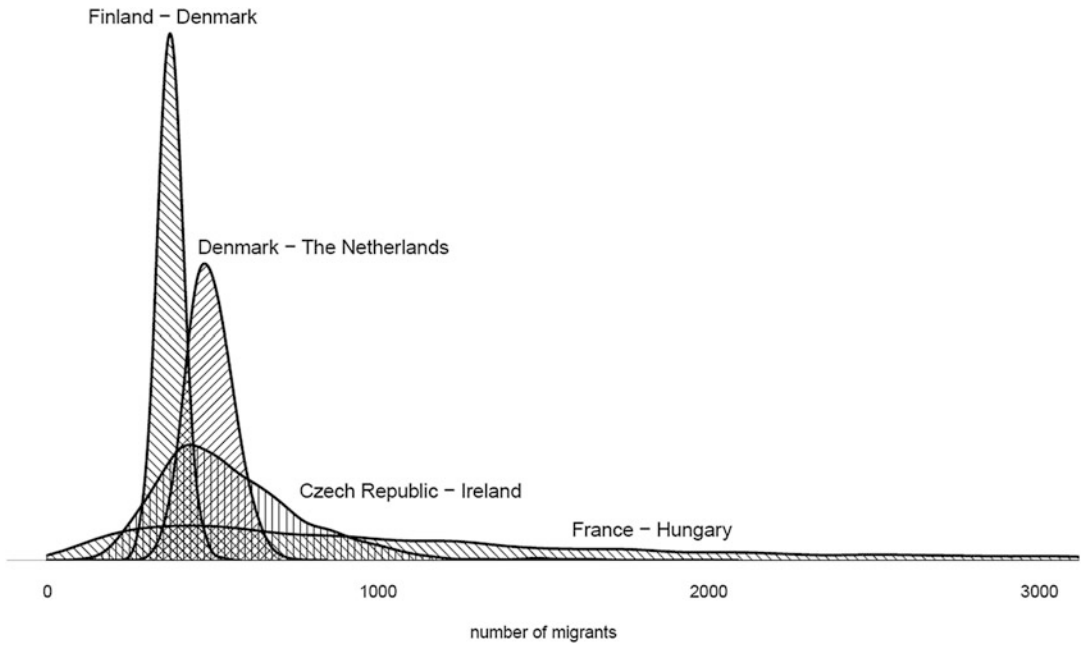

Fig. 17.2 Distribution of estimates of selected true flows from reported emigration and immigration data, 2002–2008

To illustrate the type of results produced in the IMEM project, consider the 2006 estimates of migration from Finland to Denmark, from Denmark to The Netherlands, from the Czech Republic to Ireland and from France to Hungary presented in Fig. 17.2. For the Denmark to The Netherlands flow, both countries provided data, resulting in an estimate that is comparatively certain. For the flow from France to Hungary, on the other hand, neither country provided data. Here, the estimate is based primarily on the migration model. This flow is characterized by a relatively large amount of uncertainty and a heavy right tail. The estimated flow from Finland to Denmark is characterized by relatively high precision, which results from the fact that these countries exchange their data on migrations. The last presented flow, from the Czech Republic to Ireland, is more uncertain. Despite having both pieces of information about this flow, the Irish data are inferred to be inaccurate due to the sampling error of the data source.

As another illustration, consider the 2006 flow from Poland to Germany presented in Fig. 17.3. This estimate has a median of 112 thousand people with an interquartile range of 100 thousand to 124 thousand. Here, the reported data differ considerably from our estimated true flows. This is a consequence of Poland's and Germany's duration of stay criteria used to qualify migrants. Poland uses a permanent duration, which results in a relatively small number of emigrants recorded (around 15 thousand). In the German data collection system, no time limit duration is applied for incoming flows resulting in a relatively large number of immigrants (164 thousand).

In Fig. 17.4, the estimated 2006 migration flow from Finland to Sweden is presented. The mean is around 3600 migrants with interquartile range of 3400–3800. We also observe that the data reported by both sending and receiving countries are very close to each other (around 3000). Both reported flows are considerably lower than the mean or median of the posterior true flow. This is due to our inclusion of expert information on the undercount of immigration and emigration and a very high precision of the estimate (because the countries exchanged information about the migration statistics). In De Beer et al. (2010) and Raymer

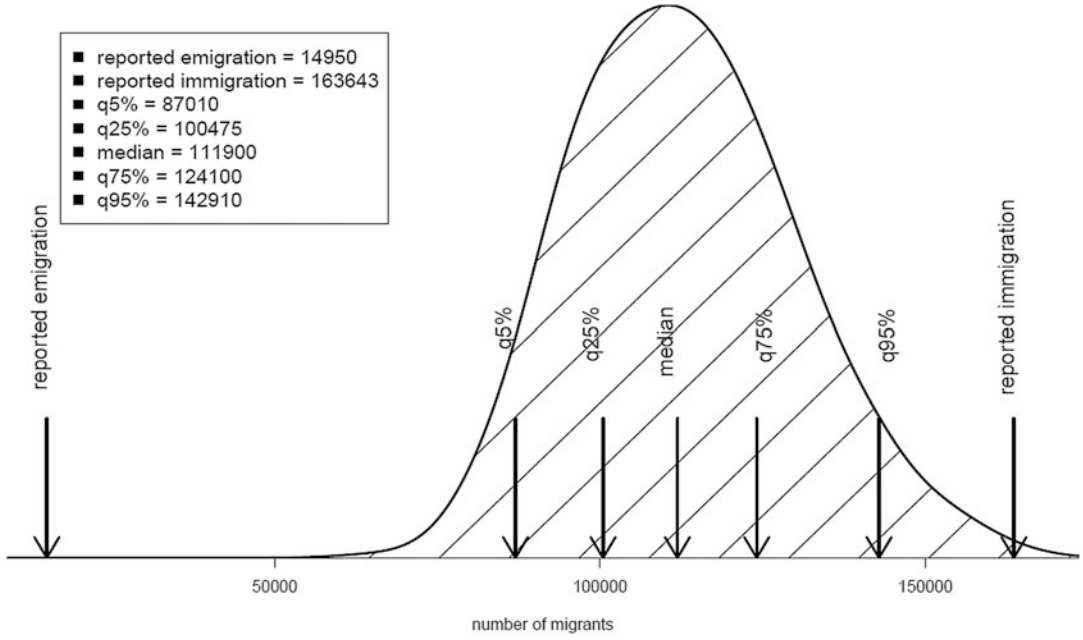

Fig. 17.3 Estimated Poland to Germany flow, 2006

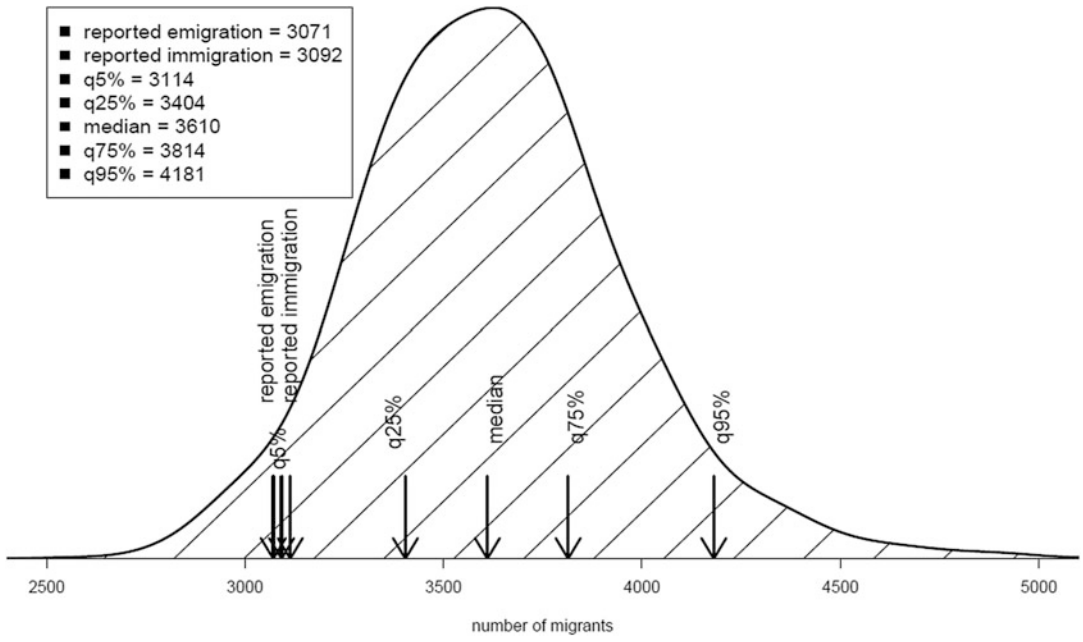

Fig. 17.4 Estimated Finland to Sweden flow, 2006

et al. (2011b), Sweden's immigration data represented the benchmark and was assumed to be measured without error or undercount. In the IMEM model, the subjective expert assessment of the immigration undercount by means of prior distributions is incorporated. This leads to higher median flows than reported by the receiving countries, including the Nordic countries.

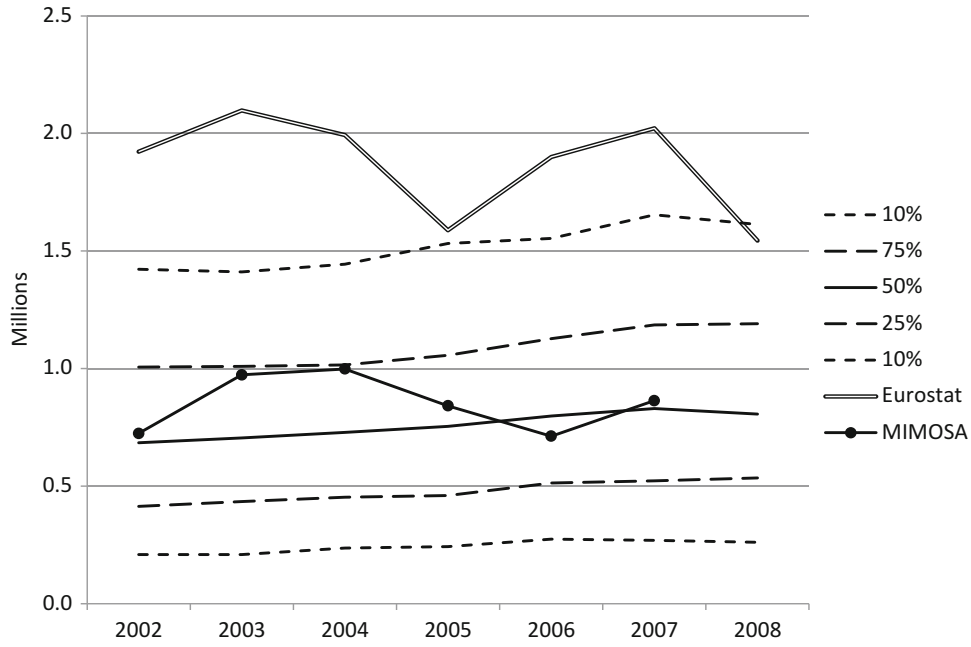

Fig. 17.5 Net migration totals for EU/EFTA countries, 2002–2008: IMEM intervals, Eurostat reported and MIMOSA estimates

In summary, the IMEM model combines a measurement model with a migration model. This allows the bringing together of reported data, covariate information and expert judgments, resulting in a consistent and complete set of estimates that can be used by the wider community. The estimated flows are consistent with the United Nations recommendation for the measurement of international migration and include measures of uncertainty, which can be used to assess the quality of the reported flows.

Annual Migration Estimates in the EU and EFTA

In this section, the IMEM estimates are shown to provide some insights into the migration patterns occurring amongst the 31 countries in the EU and EFTA. As mentioned in the previous section, the advantages of the IMEM estimates are the consistent measurement and the inclusion of uncertainty.

Net Migration Totals

Net migration totals for the whole EU/EFTA system during 2002–2008 are presented in Fig. 17.5. The median estimates range from 684 thousand in 2002 to 830 thousand in 2007. These estimates exhibit a fairly wide degree of uncertainty ranging, for example, from 535 thousand to 1.2 million in 2008 for the interquartile range.

One thing that is clear from the estimates produced in both the MIMOSA project and the IMEM project is that the official population totals for EU and EFTA countries are likely to be too high, as illustrated in Fig. 17.5. The IMEM median results show, for example, that in 2008 the overall gain in migration from the rest of world is 806 thousand persons. The corresponding figure resulting from adding up the published Eurostat data for the 31 countries under study is around 1.5 million. Eurostat's official figure, however, is likely to be overstated because it erroneously implies positive net migration within the EU and EFTA system.

Table 17.2 Estimated net migration totals for countries in the EU and EFTA, 2008

Region	Country	Percentile			Reported
		10 %	50 %	90 %	Statistics
Eastern	Bulgaria	−53.0	−40.7	−30.0	−0.9
	Czech Republic	−70.7	−14.8	25.9	71.8
	Hungary	−41.2	−5.9	43.8	32.7
	Poland	−218.1	−159.5	−107.6	−26.5
	Romania	−169.1	−108.2	21.4	1.3
	Slovakia	−15.6	0.6	17.9	13.0
Northern	Denmark	0.7	5.5	10.1	19.0
	Estonia	−8.4	−5.4	−2.6	−0.7
	Finland	11.0	13.9	17.2	15.5
	Iceland	0.0	0.8	1.7	1.1
	Ireland	−20.5	17.6	54.9	3.7
	Latvia	−10.3	−6.9	−4.6	−2.5
	Lithuania	−24.6	−17.7	−11.6	−7.7
	Norway	20.8	25.3	30.2	45.1
	Sweden	42.9	53.6	65.3	55.9
	United Kingdom	−27.6	226.2	520.7	163.0
Southern	Cyprus	2.9	9.1	14.9	3.6
	Greece	−7.5	24.4	81.3	23.2
	Italy	128.8	211.5	334.6	453.8
	Malta	−3.1	−1.1	1.8	2.4
	Portugal	−60.6	−8.1	50.6	9.4
	Slovenia	5.8	13.8	26.0	18.6
	Spain	208.1	287.6	370.8	459.5
Western	Austria	16.1	25.0	35.0	34.4
	Belgium	−12.9	35.4	125.5	63.9
	France	−95.7	135.6	734.6	76.0
	Germany	−82.4	−23.4	38.3	−55.7
	Liechtenstein	−0.2	0.2	0.8	N/A
	Luxembourg	−2.6	1.8	6.9	7.7
	Netherlands	−35.4	−17.5	−1.8	25.7
	Switzerland	−51.3	28.5	112.3	98.2

Source: IMEM and Eurostat for the reported statistics

Thus, there is a double-counting of migrants in official population totals caused by the different duration of migration measures used and the general underreporting of emigration found in the official statistics. Both the IMEM and MIMOSA approaches model the full matrix of migration flows, which ensures zero net migration within the EU and EFTA system.

The estimated net migration totals for each country in the EU and EFTA system in 2008 are presented in Table 17.2 for the 10, 50 and 90 percentiles. Here, we see that the largest median net receivers of migration were Spain, United Kingdom, Italy and France and the largest median net senders of migration were Poland and Romania. The uncertainty in the estimates is greatest for countries either not providing data or providing data of poor quality, such as France, Greece and Hungary.[11] Finally, we see that most of the estimated net migration totals differ from the reported net migration totals obtained as a residual from the demographic accounting equation.

[11] Belgium and Switzerland provide migration flow data but not by country of origin or destination.

In terms of regional patterns in 2008 (Table 17.2), negative net migration medians were estimated for all but one of the Eastern countries in the EU and EFTA. The median estimates of net migration for the Northern, Southern and Western regions were mostly positive. The largest negative median estimates were found in the Eastern region with a combined loss of over 328 thousand in 2008 alone, with Poland and Romania contributing the most. The largest positive net migration medians were found in Southern Europe with a combined gain of over 537 thousand, contributed mostly by Italy and Spain. The median estimates of net migration for the United Kingdom in the Northern region and France in the Western region were also large and positive.

Immigration and Emigration Totals

Net migration measures are useful for identifying the impact of migration but they do not give an indication of the size or direction of the flows. To further understand the migration patterns in the EU and EFTA, we next consider the immigration and emigration totals presented in Table 17.3 for each country estimated in the IMEM project. We also examine the patterns over time from 2002 to 2008. As described in section "Background", ten countries joined the EU in 2004 and two more in 2007. In this subsection, we examine what the impacts are for receiving and sending countries in relation to these years.

All of the countries in the Eastern region, presented in Table 17.3, joined the EU after 2004. Poland exhibited the most dramatic increase in emigration levels, increasing from 150 thousand in 2002 to 257 thousand in 2004 to 327 thousand in 2008. From 2002 to 2008, both Hungary and Slovakia nearly doubled their amounts of emigration. Substantial increases in emigration were also experienced by Bulgaria and Romania after they joined the EU in 2007. Bulgaria's emigration increased from 45 thousand in 2006 to 71 thousand in 2008 and Romania increased from 182 thousand in 2006 to 249 thousand in 2008.

In the Northern region, the patterns that stand out are the large increases of immigration after 2004 in Ireland and the UK and the increased emigration from the new EU members (Estonia, Latvia and Lithuania). The UK received an additional 100 thousand migrants in 2004 compared to 2002. By 2008, the level of immigration was nearly 200 thousand greater. The three countries in the Northern region that joined the EU in 2004 increased their emigration levels from 32 thousand in 2002 to 47 thousand in 2004 to 54 thousand in 2008.

In the Southern and Western regions, there appear to be no major changes between 2002 and 2008. Many of the countries exhibited steady increases in their immigration and emigration totals. The main exception is Germany, which sent 521 thousand emigrants in 2008, considerably more than the 425–440 thousand between 2002 and 2006.

Origin-Destination Patterns

The final set of analyses focus on origin-destination migration patterns within the EU and EFTA system. These flows are important for understanding the sources and destinations of migrants. In this section, we first focus on the migration patterns in 2002 and 2008 for six countries: Germany, Poland and Romania as sending countries and Italy, Sweden and United Kingdom as receiving countries. We then examine the important migration connections amongst countries in Europe in 2008. In both sets of analyses, the arrows provide an indication of the size or importance of the flow.

The top 10 migration flows from Germany in 2002 and 2008 are presented in Fig. 17.6. These flows represented about 85 % of total emigration in both years. The largest destination-specific flow is the flow to the rest of the world (not shown), which amounted to 45.7 % of total emigration in 2002 and 35.4 % in 2008. Between 2002 and 2008, we see the flows to Poland and Romania increasing. We also see Spain dropping off the top 10 list, replaced by Hungary.

Table 17.3 Estimated medians of immigration and emigration (in thousands) for countries in the EU and EFTA, 2002, 2004, 2006 and 2008

Region	Country	Immigration				Emigration			
		2002	2004	2006	2008	2002	2004	2006	2008
Eastern	Bulgaria	18.2	18.7	20.0	31.5	42.0	41.9	44.8	70.8
	Czech Republic	70.7	89.9	97.4	104.1	82.2	103.2	112.1	119.5
	Hungary	48.2	53.2	55.6	67.7	39.8	55.3	60.2	73.2
	Poland	97.3	112.6	129.3	172.1	149.9	257.3	309.3	326.6
	Romania	72.1	78.4	91.0	132.0	154.1	166.7	181.7	248.9
	Slovakia	31.3	45.3	49.7	60.4	31.3	49.9	53.9	59.6
Northern	Denmark	38.4	38.9	43.5	44.4	36.6	37.5	41.2	39.1
	Estonia	4.2	5.3	5.8	6.4	6.8	9.4	10.9	11.7
	Finland	22.6	24.2	26.4	29.9	15.3	15.2	15.5	16.0
	Iceland	3.9	4.7	5.6	5.6	4.1	4.1	4.5	4.7
	Ireland	44.2	57.5	66.5	73.4	45.9	47.1	51.3	56.4
	Latvia	3.8	4.8	5.4	6.1	8.1	11.0	11.9	12.8
	Lithuania	8.9	10.2	11.8	12.6	17.0	26.2	28.9	29.5
	Norway	30.9	31.5	38.0	44.4	21.0	19.7	19.8	19.2
	Sweden	76.5	76.3	97.3	100.6	38.9	40.4	46.3	47.2
	United Kingdom	498.9	597.6	652.3	690.3	399.0	416.9	443.1	462.3
Southern	Cyprus	14.8	17.1	18.8	22.1	8.6	10.7	12.5	13.5
	Greece	61.4	65.3	68.2	77.5	47.0	47.3	49.5	54.3
	Italy	301.3	311.4	333.7	364.9	121.6	123.7	137.6	155.9
	Malta	2.4	2.6	2.7	2.8	2.1	3.0	3.4	3.7
	Portugal	61.2	59.6	65.3	71.1	65.3	66.3	74.9	79.9
	Slovenia	20.8	21.2	23.3	24.0	7.8	8.8	9.5	10.0
	Spain	357.0	406.2	479.8	488.7	145.2	149.4	167.5	191.8
Western	Austria	72.6	82.5	78.9	87.2	50.2	53.3	57.1	62.4
	Belgium	89.4	90.9	100.9	110.6	62.5	63.6	70.3	77.8
	France	362.5	372.4	407.0	432.3	252.9	257.3	280.4	293.4
	Germany	460.5	474.0	459.2	498.5	425.3	439.8	439.2	520.8
	Liechtenstein	0.6	0.6	0.7	0.7	0.4	0.5	0.5	0.5
	Luxembourg	14.4	15.3	16.6	18.3	12.0	11.9	13.7	16.4
	Netherlands	88.3	83.8	90.7	106.5	105.5	111.3	124.9	124.4
	Switzerland	89.5	89.5	101.2	110.8	74.6	72.2	78.9	85.5

Source: IMEM

The top 10 flows from Poland are presented in Fig. 17.7. Between 2002 and 2008, emigration increased from 150 thousand to 327 thousand, respectively. The most important destination within EU/EFTA in 2002 was Germany. In 2008, Germany was still the most important but followed closely by the United Kingdom. Furthermore, Ireland and Norway now appeared on the top 10 list, replacing Austria and Belgium. Between 2002 and 2008, the share of the flow to the Rest of World decreased from 27 to 12 % of total emigration. In Fig. 17.8, the top 10 migration flows from Romania are presented. In 2002, there were 154 thousand emigrants. This increased to 249 thousand in 2008. Over time, the top destinations remained the same. Italy, Spain and Germany were the most important destinations within EU and EFTA.

Now consider the three receiving countries of Italy, Sweden and United Kingdom. In Fig. 17.9, the top 10 migration flows to Italy are presented. Rest of world migration (not shown) is very important for this country's immigration, comprising 62 % of total immigration in 2002 and 54 % in 2008. The most striking change that occurred over time was the increased importance

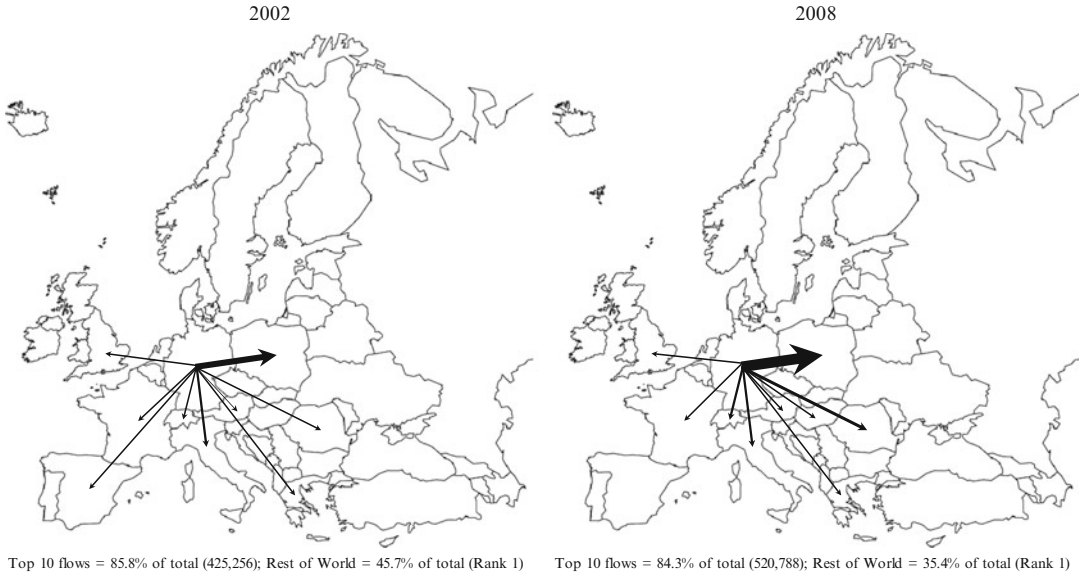

Fig. 17.6 Top 10 median flows from Germany, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

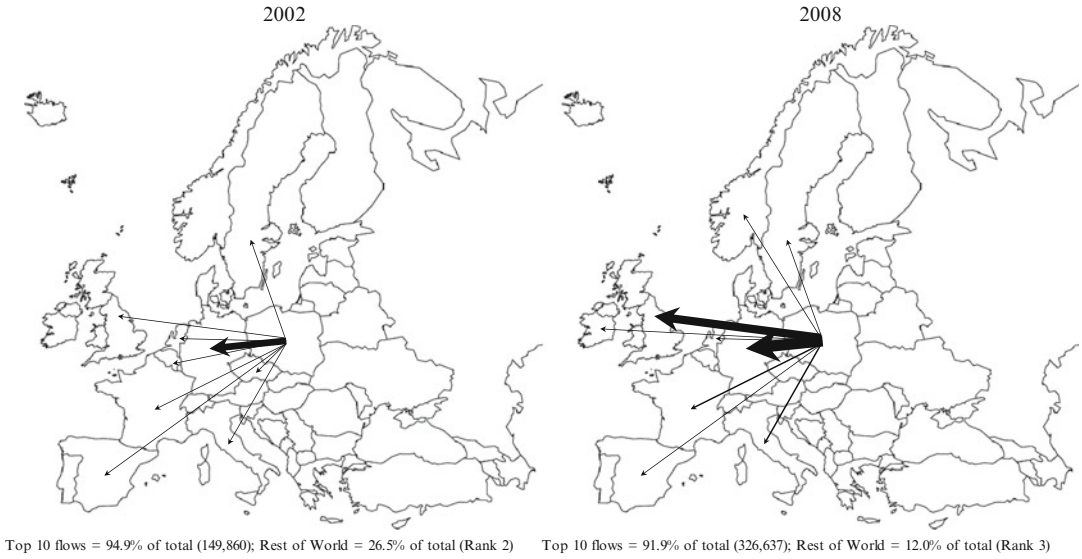

Fig. 17.7 Top 10 median flows from Poland, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

of Romania, which increased from 44 thousand in 2002 to 72 thousand in 2008. The top 10 flows to Sweden are presented in Fig. 17.10. Here, the flows are considerably smaller than the other examples included so far, reflecting the smaller size of the country and the overall sizes of the immigration flows. Again, rest of world migration is the most important flow with over 50 % of total immigration arriving from this group. In 2008, Romania appeared on the top 10 list, replacing the Netherlands. Finally, the top 10 migration flows to the United Kingdom are presented in

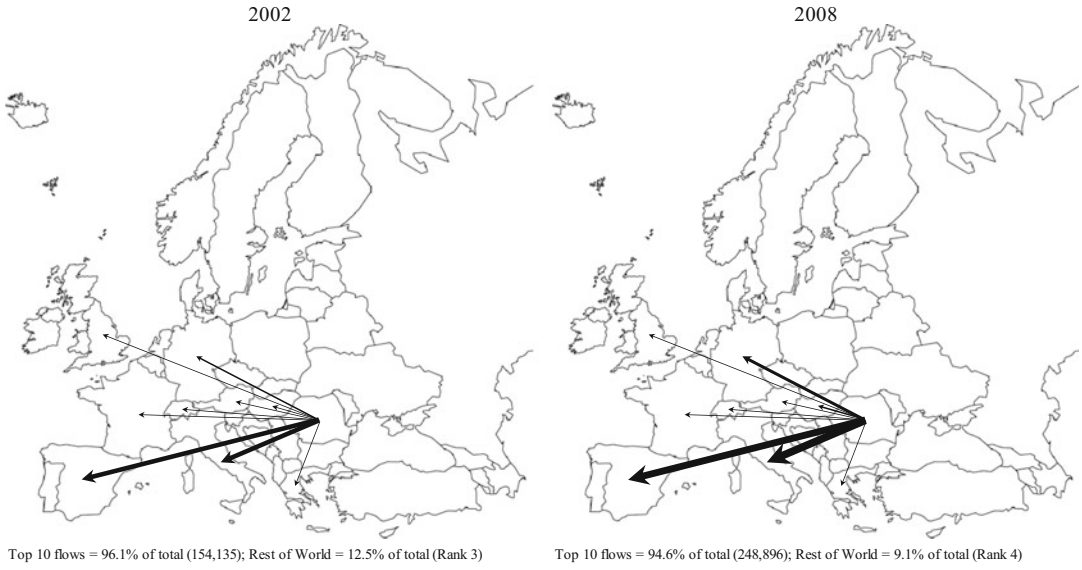

Fig. 17.8 Top 10 median flows from Romania, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

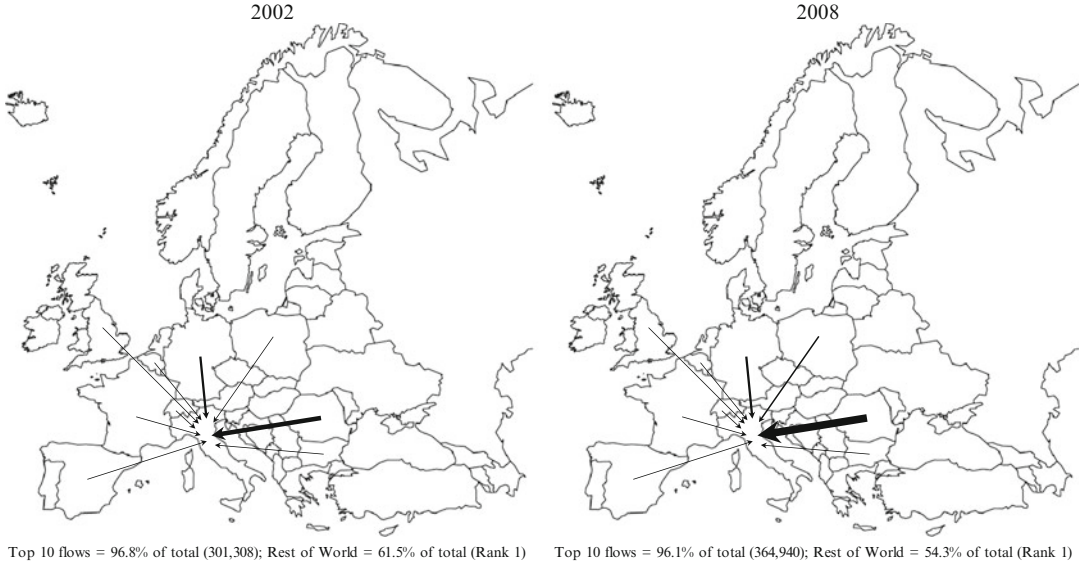

Fig. 17.9 Top 10 median flows to Italy, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

Fig. 17.11. Not surprisingly, the flow from Poland became much larger over time but so did the flow from Spain and Hungary, which replaced Portugal on the top 10 list. The share of migration from the rest of the world (not shown) decreased from 65 % in 2002 to 56 % in 2008.

The last analysis presented in this subsection focuses on the importance of connections amongst countries in the EU and EFTA. The connection measures represent the ratios of estimated (median) migration to expected (median) migration, where the expected flow is

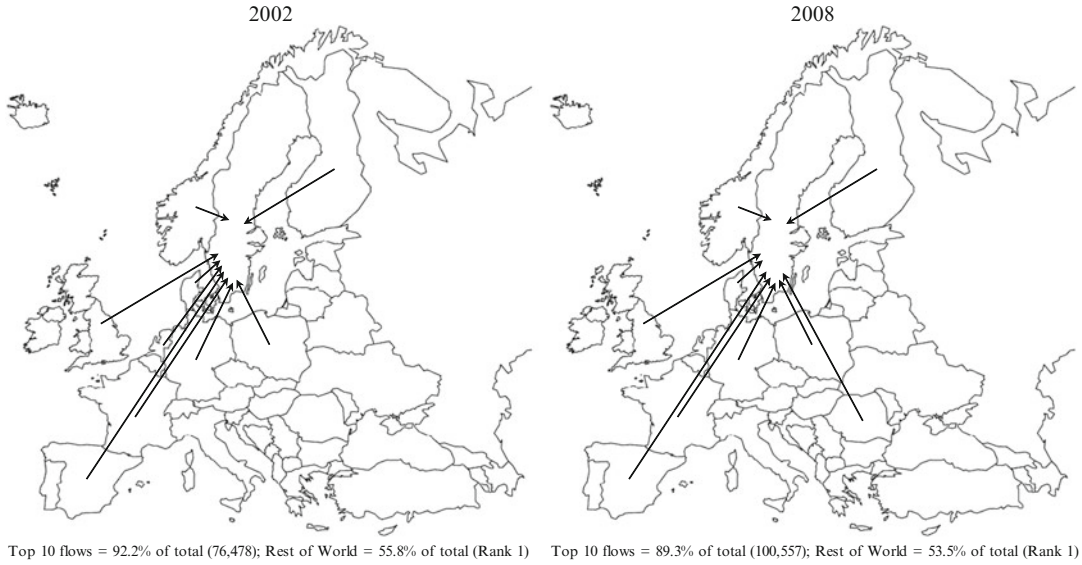

Fig. 17.10 Top 10 median flows to Sweden, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

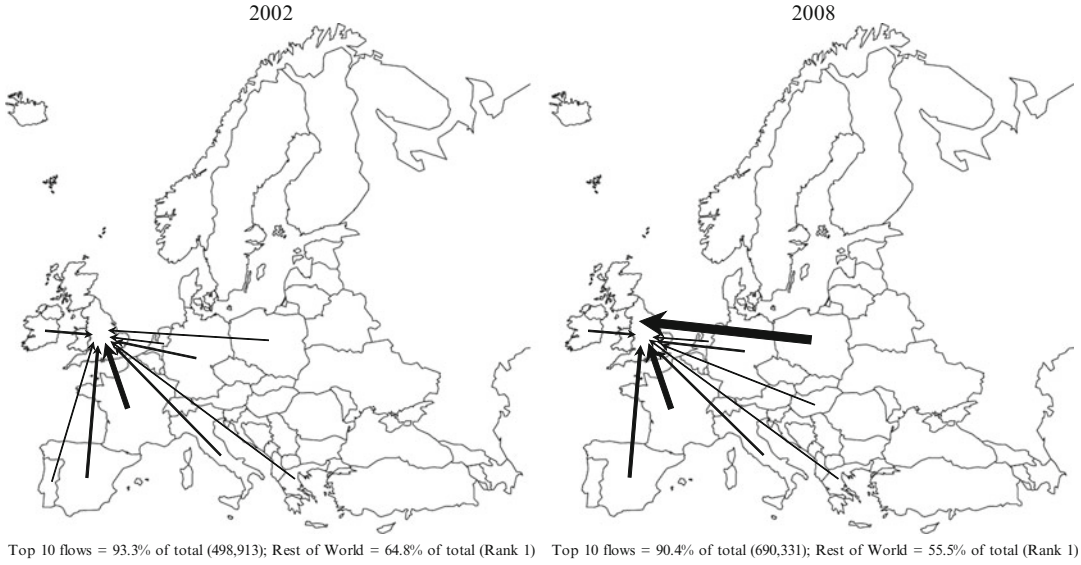

Fig. 17.11 Top 10 median flows to United Kingdom, 2002 and 2008 (Source: IMEM. *Arrows* are proportional to the size of the flow)

derived on the basis of the sizes of overall migration from the origin and to the destination. This 'association' or 'interaction' measure is very useful because it controls for the relative sizes of migration flows (Raymer and Rogers 2007). In Fig. 17.12, we present the origin-destination association measures for flows originating in Northern and Western EU and EFTA countries (left panel) and for flows originating in Eastern and Southern EU and EFTA countries (right panel). Here, only flows with ratios greater than two are presented. This means that all arrows in

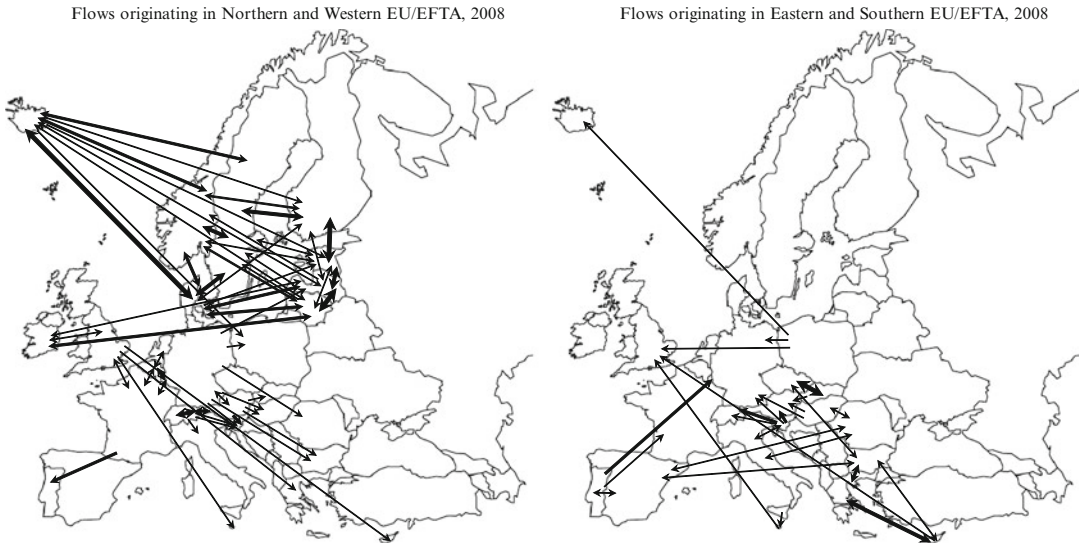

Fig. 17.12 Origin-destination association measures for flows originating in Northern, Western, Eastern and Southern EU/EFTA countries, 2008 (Source: IMEM. *Arrows* indicate the size and direction of the association)

the figures capture migration that is at least twice the expected value. Actually, the widths of the arrows capture four levels of ratios: 2.0–4.9, 5.0–9.9, 10.0–19.9 and 20.0+ .

The origin-destination association measures point out several interesting features of migration within the EU and EFTA in 2008. First, for flows originating in Northern and Western Europe, we find that there are many strong associations between neighbouring countries, as one would expect. Second, the associations are particularly strong and developed amongst countries around the Baltic Sea. Third, there are some interesting linkages, such as (i) United Kingdom's connections with Greece, Cyprus and Malta, (ii) France's connections with Portugal and (iii) Germany's connections with Romania and Bulgaria.

For the flows originating in Eastern and Southern Europe in 2008, we find that neighbouring countries are again important. The interesting linkages are the flows (i) from Poland to Iceland and the United Kingdom, (ii) from Portugal to Luxembourg and France, (iii) between Romania and Italy and Romania and Spain and (iv) between Bulgaria and Czech Republic, Bulgaria and Cyprus and Bulgaria and Spain.

Summary and Discussion

In this paper, a general picture of European migration has been provided, with a focus on recent patterns in the EU and EFTA. In section "Background", the four main phases of European migration since World War II were discussed, along with the importance of the EU/EFTA system, the pressures of demographic ageing and the diversity of foreign-born populations across regions in Europe. In section "Official Statistics and Harmonised Estimates of International Migration Flows in Europe", the main sources of migration flow data were presented along with issues concerning these data. Europe is unique in the sense that two sets of harmonised estimates of migration have been produced. The methodology underlying the IMEM estimates was introduced. Finally, the patterns of international migration obtained from the IMEM project was presented in section "Annual Migration Estimates in the EU and EFTA".

In terms of future prospects of migration in Europe, there are several things to consider. First, we can expect the data on migration to improve with the 2007 European Parliament regulation on migration statistics. Second, we can expect

migration to continue to be an important policy issue due to the expected declines in population sizes and increases in the elderly population. Finally, it can be expected that the current migrant populations will continue to expand, making Europe an even more diverse region of the world.

Acknowledgements The Integrated Modelling of European Migration project was funded by new Opportunities Funded by New Opportunities for Research Funding Agency Co-operation in Europe (NORFACE). I would like to thank the other team members, Jakub Bijak, Solveig Christiansen, Jon Forster, Nico Keilman, Jeannette Schoorl, Peter Smith, Rob van der Erf and Arkadius Wiśniowski, for their efforts in producing the estimates described in this paper.

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Migration in the Americas

18

Adriana Lopez-Ramirez and Gabriela Sánchez-Soto

Introduction

In this chapter we present an overview of the recent scholarship on migration in Latin America and we discuss some salient trends and features of migratory processes in the region. Latin America has a long and rich history of migration within and outside the Western Hemisphere. Many of the countries in the area have gone from being destination countries for European migrants in the Nineteenth and Twentieth centuries to being senders of migrants to other countries in the world and within the region by the early Twenty-First century. Today, Latin America is characterized by complex and dynamic configurations of migration, some migration streams within the region are mostly unidirectional, such as the flow of Mexican and Central American migrants to the U.S., while others are multidirectional, such as the migration flows between some South American countries and Europe, the U.S. and other Latin American nations (Durand and Massey 2010). In 2010 the estimated stock of emigrants for Latin America and the Caribbean, that is those living outside their nation of birth, was of about 30 million people or a little over 5 % of the population of the region (World Bank 2013b). Moreover, the region received approximately 62 billion U.S. dollars in remittances in 2012 (World Bank 2013a). Besides the clear notoriety of international migration, the region also features prominent flows of internal migration that include all combinations of moves between and within urban and rural areas. Rural to urban migration is particularly significant, specifically moves to some of the larger cities in the continent like Mexico City, Sao Paulo, Buenos Aires or Rio de Janeiro.

For the purposes of our review we define Latin America as being conformed by those nations in the Western Hemisphere that were colonized by either Spain or Portugal, inclusive of the Caribbean. This selection excludes the smaller Anglophone and Francophone countries in the hemisphere because they exhibit distinct colonial histories and migration experiences. However we must point out that even within our chosen region, some countries have been more prominently studied (e.g. Mexico), while others have only recently started to do so. We expect our review of existing research to reflect these gaps, and highlight the need for future research in some countries and sub-regions.

This chapter is structured as follows. We begin with a historical overview of the major patterns of internal and international migration to and from the region, highlighting some of the

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_18

most recent patterns of geographic mobility. We then proceed to discuss the sources of data for the study of migration in the region, and to highlight the plurality of sources that recent research has utilized, along with some commentary on the consistency of data availability across Latin American countries. We go on to explore the relationship between migration and social change in Latin America, with a special focus on the socioeconomic development of the region, urbanization, resource exploitation, and migration to megacities. In this section we also highlight some of the most particular features of migration in this region. We follow it with a detailed exploration of the main migration sub-systems, first the Mexico-United States migration system and secondly, the migration system in the Southern Cone.

We close this chapter with a look into the future, where we suggest some key research questions for current scholars and relevant policy issues. We also discuss what we expect will be the main data needs and measurement discussions for the years to come. Finally, our conclusion highlights some of the main lessons we can take away from the study of migration in Latin America, including the commonalties it shares with other migration regions in the world and the features that make it so particular.

Historical Overview

Mayor Flows of International Migrants

The history of Latin America has been deeply marked by international migration. European colonizers arrived first in the Fifteenth Century, followed by the forced migration of African slaves. In the Nineteenth and early Twentieth Centuries, many millions of Europeans, mostly from southern Europe, and Asians migrated to Latin America and the Caribbean (Pellegrino 2004).

By the 1950s and 1960s, this trend had all but halted. In the 1980s, the migration flows were reversed, new forms and migration patterns appeared, and Latin America made the transition from a region of immigration to one of emigration (Canales 2009; Pellegrino 2000). In association with an increasing globalizing trend, international migration not only intensified in the 1990s but new forms, and new origins and destinations emerged. In 2000, Latin America had the highest emigration rate in the developing world with 5.1 % of its population living abroad (Hanson and McIntosh 2012), which makes Latin Americans the second largest diaspora group worldwide (United Nations 2013).

The diversity and complexity of international migration in Latin America has at least three distinctive features (Canales 2009). First, since the 1900s Latin America has been a region of emigration, particularly to the United States but also to Europe, especially Spain, and Japan. Canales (2009) has estimated that half of the immigrants that the United States and Spain received in 2002 came from Latin American countries. Second, intraregional migration has diversified and increased, becoming more complex. These changes include new migratory routes, new destinations, and new emigration countries. Some countries have become transitory stops for migrants. Third, the demographic profile of migrants has also changed, with more women, families, and indigenous populations participating in the migratory flow.

International Migration in the Americas

At the beginning of the Twentieth Century, Latin America was one of the main destination regions of international migrants, along with the United States, Canada, and Australia. Nowadays, Latin America is one of the main regions of origin of international migrants to the developed world, particularly the United States, Europe and to a lesser extent Japan.

Globally, Latin America has the second highest absolute population loss among world regions, with a negative net migration balance of about 17.2 million people. Only Asia has a higher negative net migration balance with 24 million people. Latin America has a negative net migration balance to all regions in the world, with more Latin Americans in all other regions of the world (born in Latin America, now residing

outside) than immigrants from the same areas in Latin America.

In the case of the Americas, contemporary international migration can be described as a great march of the southern hemisphere workforce to the more developed north, with Latin America supplying almost one third of the net interregional migrants (Canales 2009). Approximately 80 % of Latin Americans migrate to North America, mainly the United States but also Canada, and another 10 % reside in a European Union country, mainly Spain.

Migratory patterns vary across Latin American countries. Historically, Mexicans and Central Americans have migrated to the United States, while South Americans have shown a strong preference for Spain. Between 2000 and 2006, more than 97 % of the emigrants from Haiti, Mexico, El Salvador and Guatemala, as well as 84 % of emigrants in Honduras had the United States as their destination.

The predominance of the United States as a destination for Latin Americans overall is largely attributable to the size of the flow from Mexico alone. In fact, if we exclude Mexico from the origins, we observe that (1) other Latin American countries' migration to Spain has surpassed their migration to the United States since 2001, and (2) since 2006, migration to Spain is almost double than that to the United States. In Colombia, for example, most international migration was aimed at the United States before 2000, but in the last decade the ratio of migrants is 3:1 in favor of Spain. Peru shows a similar trend, with migration to Spain almost doubling that to the United States. Overall, less than 30 % of migrants in South America move to the United States, and instead show a strong preference to emigrate to Spain (and Portugal in the case of Brazil). In 2005, 39 % of all immigrants in Spain came from Latin America, making the region the main source of immigration to this country.

Europe as a Destination for Latin American Migrants

Europe has always exercised a strong political and cultural influence over Latin America. As a result of the papal-decreed Treaty of Tordesillas in 1493, Spain received the majority of the Americas, and Portugal received a small portion of eastern South America that eventually became Brazil. England, France, and the Netherlands also established colonies (Price 2011).

The tragic demographic collapse of native populations that came with the encounter of Europe and the Americas simplified the process of colonization. Spain was able to conquer and administer an enormous territory with a strategy of forced assimilation, imposing Iberian religion, language, and political organization on the surviving native groups. Even though unions between European men and native women were not uncommon, the Iberian courts officially discouraged racial mixing and Spain's attempt of maintaining racial purity in its colonies encouraged immigration during the colonization period (Price 2011).

Besides the importance that Europe has had on shaping Latin America's human geography, the cultural mix of European and indigenous peoples saw new changes with large numbers of African slaves brought to the region through the slave trade. Due to the scarcity of indigenous labor in the Caribbean islands and the Atlantic coast of South America, beginning in the Sixteenth Century and lasting until the Nineteenth Century, approximately ten million Africans landed in the Americas (Price 2011).

After the Independence era, generally taken to be from 1818 to 1825 (Carmagnani 2010), the new leaders of the recently created nation-states sought to develop their territories through immigration, mainly of white population from European countries. These immigrants would not only provide workers to exploit the region's abundant resources but also gradually bring about a genetic change of Amerindians and Africans through the process of *mestizaje* (Durand and Massey 2010).

Argentina, Chile, Uruguay, southern Brazil, and Cuba were the most successful in attracting European immigrants from the 1870s until the Great Depression of the 1930s (Durand and Massey 2010). Before the First World War, many Latin American governments encouraged the establishment of agricultural colonies made

up of European immigrants (Bulmer-Thomas 2003). Immigrants from Italy, Portugal, Spain, and Germany were the most numerous.

During this same period, other immigrant groups arrived from Asia, mainly Japan, China, and India. Although considerably fewer in number compared to European migrants, they established an important presence in large cities of Brazil, Peru, and Paraguay. Most of this migration was selective, and workers were imported for specific tasks. Chinese coolies, for example, were mostly employed in the sugar and cotton industries in Peru, on the sugar plantations in Cuba and the Dominican Republic, in railway construction in Costa Rica, and in the henequen industry in Mexico (Bulmer-Thomas 2003). As European immigration began to slow down, Japanese immigration started during the first half of the Twentieth Century, mostly to Brazil and Peru (Durand and Massey 2010; Bulmer-Thomas 2003).

In addition to selective migration, some countries adopted a policy of mass international migration, favoring the unrestricted entry of foreigners. In Argentina, international migration began in the 1860s, and was sustained until the First World War. By that time, the foreign-born represented 30 % of the population – a figure higher than that for the United States. Uruguay and Brazil also adopted policies of mass immigration at the end of the Nineteenth Century. As in Argentina, the largest single group of migrants in Uruguay was of Italian origin. The state of Sao Paulo, Brazil was able to attract a large numbers of Italians and Portuguese after the abolition of slavery in 1888 (Bulmer-Thomas 2003).

The transformation of Europe from a region of emigration to one of immigration took place in the context of major economic and demographic changes. After the end of World War II, a period that witnessed an exodus from the European continent, Northern and Western Europe entered a long phase of economic growth that kept workers at home and also brought about labor shortages (Durand and Massey 2010). As a result of the growing demand for labor, two key trends emerged in Europe: recruitment of workers from selected Third World nations and immigration from colonies and former colonies. Labor migrants arrived from different regions, but predominantly from countries of southern Europe, characterized by stronger demographic growth and weaker economies (Pellegrino 2004). While European countries such as Germany and France embarked on guest-worker programs that recruited workers from selected Third World nations and immigrants from colonies and former colonies, in North America, the United States increased its foreign born population by recruiting unskilled workers from neighboring Latin American countries and admitting refugees during the Cold War.

In addition to economic factors and the demand for labor, migration processes in the 1950s and 1960s were also determined by demographic factors. In the post-war era, Latin America experienced rapid population growth due to high birth rates. In 1950, the total fertility rate for the whole region was 5.88 children per woman, reaching its maximum of 5.97 in 1960. In Mexico and Brazil, fertility rates were even higher, and contributed to a largely young population that continued to enter the labor force in large numbers in the 1980s and 1990s (Durand and Massey 2010).

In the 1970s and particularly as of 1974, the oil crises and accompanying oil price hikes seriously affected European economies and ended a phase of strong economic growth. The measures that previously aimed at attracting workers were replaced with "closed door" policies. However, some European countries remained especially sensitive to the reception of political refugees and exiles from the dictatorships of South America that emerged during the 1970s and 1980s (Durand and Massey 2010; Pellegrino 2004). These years also saw considerable political and social violence in Central America. The resulting exiles and emigration pressure due to economic causes which, in many cases, were difficult to separate from the context of crisis and political violence, involved a diversification in destinations, including countries that previously had not been considered as recipients of migration flows. South America's economic turmoil in the past two decades resulted in many ethnic

Japanese emigrating to Japan in search of better opportunities, with nearly one-quarter leaving in the 1990s mostly from Brazil and Peru (Price 2011).

The number of Latin American migrants in countries such as Spain and Italy, countries with strong historical and cultural ties to Latin America, has grown significantly. The settlement of these migrants, to a great extent exiles from the dictatorships of South America, began to take shape in the 1970s and 1980s. As Latin American political refugees fled from dictatorships at home, migration flows from Latin America to Europe diversified in terms of both origin and destination countries. The United Kingdom, France, Switzerland, Germany, the Scandinavian countries, Spain and Portugal all became popular destinations for Chileans, Argentineans, Uruguayans, and Brazilians between the 1960s and the 1980s (Padilla and Peixoto 2007).

Labor emigration in the most traditional sense, mainly to Spain, began in the 1980s, intensified in the late 1990s, and has continued up to the present time (Pellegrino 2004).

The Latin American Presence in Spain

The most recent pattern of international migration observed in Latin America involves transoceanic migratory processes (Durand and Massey 2010). Among the factors associated with this recent pattern are colonial ties, bilateral agreements, citizenship or residence rights granted to descendants of earlier emigrants, and migration policies along racial or ethnic lines (Durand and Massey 2010), as well as civil and military conflicts (Hanson and McIntosh 2012). The two main destinations in this transoceanic migration pattern are Europe and Japan.

International migration from Latin America to Europe started in the last decade of the Twentieth Century and continued to develop in the first decade of the Twenty-First Century. Only a select group of Latin American countries participate in this process, including Ecuador, Colombia, the Dominican Republic, Argentina, and Peru. Other countries such as Bolivia, Cuba, and Brazil also contribute to the flow of international migrants but to a lesser extent. Most of the Latin American migrants in Europe can be found in Spain, Italy, and Portugal.

Until the late 1980s, Spain was primarily a source of emigration with two main areas of destination: Northern Europe and Latin America. In 1986, after Spain entered into the European Union, it became an important destination for migrants from former colonies in Latin America and North Africa (Connor and Massey 2010). The reception of migrants was supported with agreements that allowed them to legally enter into Spain and ultimately obtain work permits and citizenship status (Hanson and McIntosh 2012; Padilla and Peixoto 2007).

The scale and pace of the growth of international migration flows has made of Spain an exceptional case in the European context. Several social, economic, and demographic changes that initiated in the late 1970s contributed to create labor demand of migrant workers as well as an environment that gave preference to Latin American immigrants (Cerrutti 2013). In a segmented labor market, international migrants contributed to the social mobility of young and educated Spanish generations by concentrating in occupational niches such as the construction sector for men, and the domestic and hospitality services for women (Domingo 2002; Maguid and Cerrutti 2012).

The history of migration from Latin America to Spain can be described in terms of the nationalities that participate in the immigration flows. In the early 1990s, 29 % of all Latin American international migrants in Spain were born in Argentina, and Peru, Venezuela, and the Dominican Republic each contributed with 10 % of the stock of Latin American immigrants. By the late 1990s, Ecuador and Colombia were the main contributors to the Latin American immigration stock in Spain, followed by Peru and the Dominican Republic (Martínez Buján 2003). In the case of the Dominican Republic, Spain became a leading destination for Dominicans after the Venezuelan oil crisis in 2004, particularly for migrants of rural origin (Pellegrino 2004).

During the Twenty First Century, Spain experienced a dramatic increase in the number of its

foreign born population along with a diversification of the countries of origin (Cerrutti 2013; Maguid and Cerrutti 2012; Huesca 2010). In terms of number, the share of the foreign born population went from 3 % in 1998 to 12 % in 2007, and 14 % in 2011, which represents more than 6.6 million people (Maguid and Cerrutti 2012). In spite of the rapidly growing numbers of foreign born in Spain, a plateau was reached between 2008 and 2009 mostly as a result of the economic recession that the country has experienced since 2007. It is still unclear if the economic crisis and the resulting lower employment opportunities and high unemployment rates have encouraged international migrants to return to their countries of origin. Given the costs associated with transoceanic migration and that most Latin Americans were able to benefit from a series of legalization programs (Massey and Capoferro 2006), return migration has been uncommon. Unfavorable economic circumstances in countries of origin, tighter border controls and increased restrictions to immigration due to the crisis in Spain have also encouraged international migrants to remain in Spanish territory (Maguid and Cerrutti 2012).

At the beginning of the 1990s, only 3 among the 15 foreign born groups with the largest representation in Spain, were not European (Morocco, the United States, and the Philippines). In the 1996–2006 period, 72 % of the population growth in Spain was due to the increase in the foreign born population (Cortina et al. 2008), and around 50 % came from Latin American countries, with Ecuadorians and Colombians alone representing a fourth of the total number of foreign born according to the 2001 Spanish census (Domingo and Martinez 2006; Martínez Buján 2003). These two groups also lead the ranking of documented migrants in Spain, while Bolivians and Paraguayans are disproportionately composed of undocumented migrants compared with other Latin American groups (Connor and Massey 2010).

For some scholars, the increase in the Latin American population in Spain's immigration registers is not necessarily due to a significant increase in inflows in recent years, but is rather the result of the legalization processes of 2000 and 2001, which benefited mostly Latin American immigrants. Of all the legalization applications filed in 2000 that were approved, 52 % were from individuals born in Ecuador and Colombia, thus granting 82.3 % of Ecuadorians and 78.7 % of Colombians residence and work permits (Martínez Buján 2003).

The Latin American Presence in other European countries

Regardless of the criteria used, citizenship or place of birth, Spain has been the main destination of Latin American migration in Europe according to the most recent report. In 2001, Spain led with 840,000 Latin American and the Caribbean foreign born, followed by the United Kingdom and the Netherlands, each more with more than 300,000 individuals. France, Portugal, and Sweden follow (Padilla and Peixoto 2007).

Compared to Spain, where Latin American immigrants represent 39 % of the foreign born population, its presence is lower in the rest of Europe: 19.5 % of the total foreign born population in the Netherlands and 11.6 % in Portugal are from Latin American countries (Padilla and Peixoto 2007). In Italy, they represent approximately 8 % of the foreign born, with the majority coming from Peru and Brazil (Pellegrino 2004).

The history of Latin American migration to Portugal is similar to that in Spain. Historically, Portugal was characterized by strong emigration to the Americas and to its former colonies in Africa, a trend that dates from the Fifteenth Century, the beginning of Portugal's period of overseas exploration. From the middle of the Nineteenth Century to the late 1950s, nearly two million Portuguese migrated to the Americas, mainly to Brazil and the United States. Beginning in the late 1950s, with the growing economies of Northern and Central Europe, and until 1974, more than 1.5 million Portuguese emigrated to meet labor market demands, mainly in low-wage, low-productivity sectors (Malheiros 2002). Some Portuguese also left the country due to the dictatorial regime that lasted between 1926 and 1974.

In the mid-1970s, emigration from Portugal slowed down in response to an economic crisis in Europe's major economies, and the Portuguese Revolution of 1974 which ended a dictatorial regime and saw the return on many Portuguese exiles. Even though Portuguese emigration increased again in the late 1980s and early 1990s, with Portugal's entry into the European Union in 1986, emigration flows decreased and new emigration characteristics emerged by the early 1990s: an increase in the proportion of females participating in migration flows, rising skill levels, and temporary migrants who took advantage of the European Union's free movement policies.

Immigration to Portugal started as early as the late Fifteenth Century, particularly to Lisbon. In addition to merchants and adventurers from England, Spain, Italy, and Dutch provinces, thousands of African slaves arrived in Portugal. In the first half of the Sixteenth Century, Lisbon was the European capital with the largest proportion of African residents, an estimated 10 % of the total population (Malheiros 2002). After the middle of the Seventeenth Century and for an extended period of time, immigration flows onto Portugal were extremely small and came mainly from Spain (Fonseca et al. 2002). This immigration lull ended in the second half of the 1960s, when Portugal registered the first arrival of African workers from its colonies along with immigrants from Spain and the United Kingdom.

In the mid-1970s, a combination of internal and international factors which included the establishment of a democratic regime in 1974, the African decolonization process, the beginning of the European Union integration, and the modernization of the Portuguese economy, changed Portugal's migratory tradition (Fonseca et al. 2002). With the process of decolonization and subsequent political and military instability in the Portuguese-speaking African countries (PALOP), Portugal experienced significant immigration flows. More than half a million migrants from Mozambique, Cape Verde, Angola, and Guinea-Bissau arrived in Portugal, in particular to the Lisbon area (Malheiros 2002). Some of these immigrants were "retornados" and their descendants, i.e. people born in Portugal or their children or grandchildren, but many were refugees who lost their Portuguese nationality because of their African origin, and were thus excluded from social benefits and political participation in Portugal (Fonseca et al. 2002).

Portugal's entry into the European Union in 1986 marked the beginning of a new migration cycle due to the increased demand for labor that attracted non-EU citizens, mainly Africans and, to a lesser extent, Brazilians. Until the end of the 1990s, immigration to Portugal was closely linked to the country's colonial past with foreign born from PALOP and Brazil representing 55 % of the stock of documented residents in Portugal (Fonseca et al. 2002).

In Switzerland, the Latin American population grew from fewer than 6000 people in 1990 to 21,000 in 2000. Approximately 60 % of immigrants from Bolivia, Ecuador and Peru are living in Switzerland without proper documentation. Sweden received significant numbers of exiles and refugees from Latin America during the region's period of dictatorships and violence. Although many of these immigrants returned to their countries of origin, some groups were consolidated, particularly those from the Southern Cone: Argentina, Uruguay and Chile (Pellegrino 2004).

International Migration Within Latin America

Migration within Latin American countries began in the first decades of the Nineteenth Century, when nation-states were established and national borders were defined. This migratory trend is characterized by its long duration and wide diffusion (Durand and Massey 2010). Until the 1960s, international migration was restricted to rural-rural or rural-urban movements between bordering countries, notably seasonal migration. Since borders could be crossed without great difficulty, Pellegrino (2000) suggests that a significant portion of international migration should actually be regarded as an extension of internal migration beyond national borders. Communities shared identities and political borders determined during the wars of independence did not deter migration.

Until the 1970s, most migratory movements occurred within the region known as Mesoamerica, the Caribbean, and South America. The high cost of transportation along with the need for passports and visas can partially explain the relative limited range of movement in this period of time. During the 1990s, Latin America embarked on a process of globalization and economic policies encouraged a transition to open markets accompanied by a liberalization of transit controls for trade, tourism, and labor.

As a result of this globalization process, distinctive patterns of international migration within Latin America can be identified. The first one is characterized by seasonal moves of short distance that are tied to agricultural cycles, including Bolivians migrating to work in the sugar and tobacco industries of northern Argentina; Paraguayans doing horticultural work in northeast Argentina; Peruvians harvesting bananas and mangos in Ecuador; Nicaraguans traveling to the annual coffee harvest in Costa Rica; Guatemalans migrating seasonally to coffee farms in southern Mexico; Colombians working on farms in Venezuela; Dominicans harvesting coffee and sugar cane in Puerto Rico; and Haitians migrating to cut sugar and harvest coffee in the Dominican Republic.

The second migration pattern has cities and metropolitan areas as destination. This pattern involves two different types of migrants. Migrants with technical skills or professional training tend to locate in capital cities and move in search of educational and work opportunities. Venezuela stands out as one of the main receivers of professional migrants in Latin America due to the long period of economic prosperity that this country experienced with the oil boom (1950–1980). Along with high salaries and living standards, Venezuela implemented policies to attract professionals and technicians, and its foreign born population from other Latin American countries more than tripled between 1970 and 1980 (Pellegrino 2004). According to data from a 1980 legalization program, 12 % of Bolivians, 10 % of Peruvians, 8 % of Chileans, and 9 % of Argentineans had a college degree. In 2001, 4.4 % of Venezuela's population were Latin American immigrants (Durand and Massey 2010).

On a smaller scale, Mexico, Chile, and Argentina also attract migrants because of relatively high salaries. Mexico and Venezuela have also been countries of destination for political dissidents fleeing from dictatorial regimes in Central and South America during the 1970s and 1980s. It is estimated that during the Pinochet dictatorship, around 2 % of the population left Chile for exile in Mexico and Venezuela, as well as Canada, France, Sweden, and socialist countries. In the case of the Cuban exile, even though it is directed principally to the United States, Cuban migration within Latin America has been growing in recent years, with new streams going to Puerto Rico, Mexico, Brazil, and Venezuela (Duany 1992).

The migration pattern with cities as destination also includes migrants of rural and urban background. These unskilled migrants participate in the labor market as domestic servants, elder care workers, construction workers, personal service providers, and low-level manufacturing and sales personnel. Examples include Peruvian women who are child care providers in Chile, Bolivian and Paraguayan men who do construction work in Argentina, Colombians who participate in the informal economy of Venezuela, Nicaraguans in Costa Rica, and Dominicans in Puerto Rico.

In South America, Argentina was not only a major receiving country for European immigration in the Nineteenth and Twentieth centuries, but also attracted migrants from bordering countries. Even though international migrants originally settled down on border regions, in the 1950s they started to turn to urban areas, particularly Buenos Aires. Chileans, Paraguayans, Bolivians, and most recently Peruvians have long been an important presence in several Argentine cities. In Buenos Aires, they have taken over entire neighborhoods to form ethnic enclaves (Durand and Massey 2010; Durand 2009). Venezuela, Costa Rica, and Mexico are also traditional cross-border migrant-receiving countries (Pellegrino 2004).

In the 1970s, Argentina, Chile, and Uruguay suffered a political and economic crisis that led to the formation of military dictatorships and encouraged emigration to a variety of destinations, including Europe, Australia, the United States and Canada, as well as other Latin American countries, primarily Mexico, Venezuela, and Costa Rica. Also during and after the 1970s, a number of Central American countries witnessed rural-rural cross-border movements. Instability and violence turned the region into one marked by population movements. The displaced population in the region stood at over 1,163,000 in early 1990, according to information collected by the United Nations High Commissioner for Refugees. The refugees were located in Mexico, Costa Rica, Guatemala, and Honduras.

The debt crisis of the 1980s had an impact on international migration. Traditional receiving countries of migrant workers (Argentina and Venezuela) saw a leveling off in immigration from neighboring countries. The most significant phenomenon was the increased migration of Latin Americans to the United States, and to a lesser extent, Canada.

Brazil's experience in the international migration system dates from the Nineteenth and early Twentieth centuries, when it received a large number of migrants from Europe and Asia. In terms of emigration, around 3000 political refugees left the country during the most repressive years of the 1964–1985 dictatorial regime. Most of these refugees returned to Brazil after an amnesty was declared in 1979. During the 1980s, the number of Brazilians emigrating due to high unemployment rates started to increase significantly (Sales 2012). The estimate number of Brazilians emigrating in the period 1985–1987 is of 1.25 million persons, which represented around 1 % of the total population in those years. Most Brazilians went to the United States (38 %), Paraguay (30 %), Japan (13 %), and several European countries (mainly Portugal and Italy).

With regards to immigration, 56 % of the total foreign born migrating to Brazil were from Europe, 21 % from Central or other countries in South America, and 18 % from Asia. The main countries of origin were Portugal, Japan, Italy, Paraguay, and Argentina. High-skilled temporary workers are increasingly coming from within the Latin American region and from new source countries like the United States and China. In 2000, international migrants who arrived to Brazil in the last 10 years came from elsewhere in Latin America: 12 % from Paraguay, 9 % from Argentina, and 7 % from Bolivia (Mazza and Sohnen 2010).

In 1990, Japan established mechanisms for foreigners of Japanese descent and their families to live and work in Japan. With these incentives, and active recruiting practices, migration from Brazil and Peru increased sharply. Many of these migrants worked in low-skilled jobs. During the recent economic crisis, unemployment rates of Latin American immigrants reached 40 %, prompting Japan to enact a repatriation program. Of an estimated 350,000 Latin American immigrants, by late 2009 only 13,000 had applied to this "pay-to-go" program, mostly from Brazil (Mazza and Sohnen 2010).

In the 1970s, the Paraguay government offered incentives as part of an agricultural development policy and Brazilians were hired as farm laborers. The movement of these "Braziguayans" was a major phenomenon with significant social and geopolitical consequences for the region (Sales 2012).

Peruvian emigration has emerged only in the past decades. Before 1970, the few migrants that left Peru were for the most part members of the elite who went to study abroad. International migrants from Peru are typically from urban areas, particularly metropolitan Lima (Takenaka and Pren 2010). Peruvians were the fastest-growing national group in Venezuela, Argentina, Brazil, and Chile. They also increased in number in the United States.

Socio-demographic Profile of Latin American Migrants

Latin American migration follows the classic age pattern where the majority of the emigrants are young, economically active adults, regardless of country of destination. The age-structure of Latin

American international migrants reflect the fact that this migration is essentially labor-based. More than 71 % of the Latin American migrants residing in Spain are between 20 and 49 years old, while approximately 65 % of those who migrate to the United States are in the same age group.

The immigration of young Latin Americans has not only helped compensate for the declining birth rates in United States, and especially in Spain, but it has also caused important growth in this age group, contributing to the demographic sustainability of the populations of the United States and Spain. In Spain, one in ten people between 25 and 35 years old is a Latin American immigrant. In the United States, this figure is approximately one in eight.

Latin American migration to the United States is predominantly male while Spanish immigrants tend to be female. In terms of the international migrant stock, there were 84 men for every 100 women of Latin American origin living in Spain, while the corresponding figure in the United States was 115 men for every 100 women. The predominance of male migrants in the United States can be explained by the long-standing migratory tradition of Mexicans and Central Americans who tend to work as agricultural or construction day-laborers, economic sectors which are traditionally and overwhelmingly male. The predominance of female migrants in Spain can be explained by Latin American women's incorporation into the service industry, especially care work of children, older adults, and other dependent household members, as well as domestic service. Some researchers refer to this process as the transnationalization of the maternal and industry care (Hondagneu-Sotelo 2001; Herrera 2005).

Latin American immigrants in Italy, as well as in Spain, are mostly women. Some scholars suggest that the feminization of migration is related to the modality of integration of migrants into the labor market (Canales 2009; Pellegrino 2004). The sex composition of the Latin American migration flow to Spain is partially determined by the labor conditions and social integration in the areas of destination. The greater presence of female migrants in Spain can be explained by the incorporation of Latin American women into the service industry, especially caretaking of children, elders, and sick people, as well as domestic service, In the segmented labor market of Spain, where the informal activities are an important component of the economy, women along with young people and international migrants are particularly welcome by providing low-skilled activities such as personal services (Domingo and Martinez 2006).

The relative stability of the sex ratio suggests structural differences between Latin American emigration to the United States (more masculine) and emigration to Spain (more feminine). The stability of this pattern applies to almost all the countries in the region. The only exception to this is Central American emigration to the United States, where emigration was markedly feminine in the mid 1990s and it has been markedly masculine in the last few years (Canales 2009).

According to Martínez Buján (2003), the recent evolution of Latin American immigration in Spain tends towards an increase in the proportion of men. The author attributes this fact to the effects of settlement: once the women immigrants are established, they send for their families (in this case, the male spouse) and tend to reconstitute their families in the receiving country. Such settlement has been stimulated in Spain by the immigrant status regularization programs carried out in 2000 and 2001, paving the way for family reunification. Izquierdo (2002) also note a recent increase in the demand for male workers by the agricultural, construction and service sectors (Pellegrino 2004).

Educational level

The educational background and employment prospects of Latin American immigrants vary according to the conditions and circumstances under which they emigrated, but generally hinge on demand in the labor markets of receiving countries (Pellegrino 2000). Distance generally introduced greater selectivity by increasing the costs and risks of migration, while refugees and displaced groups fleeing from political

repression come from a much wider range of backgrounds than migrant workers.

In terms of migrants' educational level, there appears to be three types of international migration flows in Latin America. Migrants from Mexico and Central America who go to the United States have overwhelmingly very low levels of education: 60 % of Mexicans and 51 % of Central Americans have not finished high school, and only 8 % of Mexicans and 13 % of Central Americans have some post-secondary education (Canales 2009). Compared to other Latin American migrants, South American migrants who travel to the United States and Central Americans who move to Spain, tend to show higher than average levels of education. In both cases, nearly one third of the migrants have university or professional studies (although not necessarily completed). Additionally, almost half of them (between 46 and 48 %) have finished high school.

Even though Mexican migrants have the lowest levels of education, there is still selectivity. The proportion of emigrants with low levels of education (less than high school) is smaller than that of the Mexican population as a whole, while the proportion of migrants with an intermediate level of education is higher than that of non-migrants.

In Argentina, cross-border migrants in the 1980s and 1990s had a somewhat lower educational profile than that of the native Argentinean population, with the exception of Uruguayans, whose educational standards were similar to those of the Argentinean population itself. Due to policies attracting skilled migrants and offering high pay, Venezuela was the Latin American country taking in the highest number of professionals and technicians from other countries in the region in the 1970s. These policies created a marked difference regarding immigration between cross-border immigrants from Colombia and the Dominican Republic, and immigrants from other southern Latin American countries like Peru. In the first case, immigrants had below-average standards of education, whereas in the latter qualifications were way above average (Pellegrino 2000).

Selection by arriving and departing group can work in the opposite direction as well, especially as labor demands and skills levels vary in potential origin and destination countries. Central Americans and Mexican migrants moving between close or bordering countries, have much lower standards of education than the average in the receiving country and, in many countries, than in their countries of origin. Immigrants from other countries, however, have much higher levels of education than those of the country of origin and the receiving country. Venezuela, Panama, Chile, Bolivia, Peru, and Argentina show the same pattern regarding educational differences (Pellegrino 2000).

Labor Participation of Latin American Immigrants

The emigration of industrial workers was a widespread phenomenon in the 1970s and 1980s, and accounted for a considerable portion of the total working population in urban areas in Argentina and Venezuela. Similarly the emigration of professionals and technicians constituted a major phenomenon in Latin American migration (Pellegrino 2000).

With the widespread crisis in the 1980s, regional migration changed its profile. Migrants tended to be polarized at both extremes of the labor market, and there were more self-employed migrants and more migrants working in services and commerce. The polarization of the labor market meant that along with highly skilled migrants occupying professional, technical, and managerial positions, unskilled migrants accounted for the bulk of personal services and manual employment in the least specialized sectors (Pellegrino 2000). While Mexicans represent the largest contingent of professionals migrating to the United States, within Latin America, Colombians in Venezuela form the bulk of skilled immigrants according to the 1980s and 1990s censuses.

Since Latin American migration to Spain and the United States is essentially driven by labor and economic factors, we observe relatively high levels of labor force participation among economically active adults regardless of level of

education. Latin American male immigrants have a higher than average level of participation in the labor market than the native populations of Spain and the United States. In Spain, South American male migrants have a labor participation rate of 90 % and Central Americans have an 80 % rate. Both these statistics are far higher than the participation rate of the native Spanish population. The situation is similar in the United States. Mexicans and Central and South Americans have an average participation rate which is between 13 and 19 % points higher than Anglo-American men.

In the case of women, about 70 % of Latin American immigrants in Spain participate in the labor force, in contrast to only 47 % of native Spanish women. There is a greater heterogeneity among the female migrant population in the United States according to country and region of origin. Female immigrants from Central and South America have a 5 % higher level of economic participation than native Anglo-American women, while among Mexican female immigrants economic participation is much lower than other immigrants' levels as well as that of Anglo-American women.

In both Spain and the United States, Latin American migrants work disproportionately in the construction industry. This industry employs 31 % of the Latin American male migrant work force in the United States and 39 % of that in Spain. The labor situation for Latin American women is more heterogeneous. In the United States, almost 50 % of them work in professional and social services, and 18 % work in personal services industry. South Americans are more likely to have a professional career while Mexican and Central American women are more likely to work in personal services. In Spain, only 14 % of Latin American immigrant women work in professional services, 37 % are employed in personal services and 30 % work in the commercial sector.

In spite of the heterogeneity of Latin American migrants with regard to levels of education, age and sex, many of the migrants face working conditions in their destination countries characterized by social exclusion and vulnerability (Canales 2009). Employment among immigrants is frequently marked by job placement in positions which are unstable, precarious, and unskilled. This high level of employment insecurity and vulnerability means that Latin American migrants often have lower levels of social protection and more instability. They are strongly affected by deregulation and the precariousness of their working conditions since they often find themselves employed in domestic service as well as the agricultural and construction industries.

For some scholars, international migration represents an example of structural inequality between countries and regions associated with the process of globalization. The mobility of Latin American population has contributed to the diversity and ever increasing complexity of migration patterns. Latin America has changed from being a region that once attracted migrants to a region of emigration, contributing to the march South-North. Until the 1970s, Latin American emigration was almost exclusively intraregional and primarily among neighboring countries. Nowadays we observe that intraregional movements have spread beyond crossing neighboring borders, and emigration to the developed world has increased, especially to the United States and more recently to Europe, Japan, and Australia.

Migration and Social Change in Latin America

Migration and the Socioeconomic Development of the Region

One of the most immediate impacts of migration in regions of origin is that of remittances. Depending on the country and the type of migration, remittances may account for an important share of the income of families in communities of origin. Latin America and the Caribbean region received an estimated $62 billion dollars in remittances in 2012 (World Bank 2013a). Figure 18.1 shows the amount of remittances received by selected Latin American countries according to World Bank

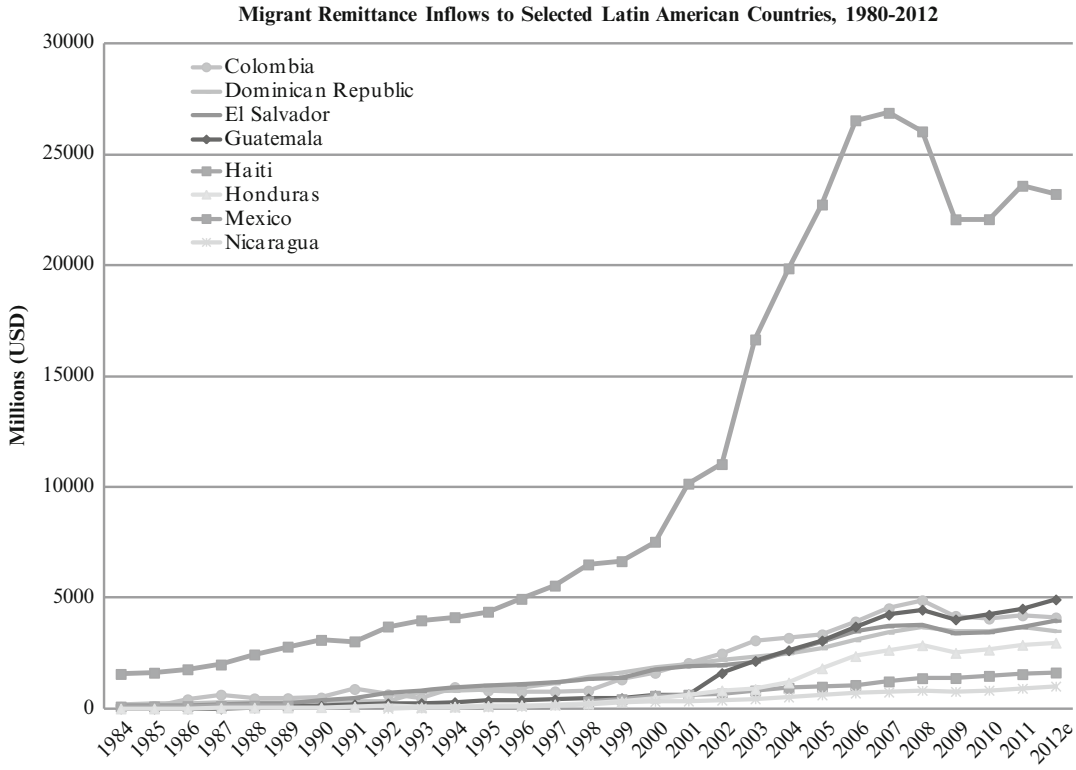

Fig. 18.1 Migrant remittance inflows to selected Latin American countries, 1980–2012 (Source: World Bank Remittances Data 2013. All numbers are in current USD. Raw data available online: http://www.worldbank.org/migration)

figures. In this graph, we can see that the flow of remittances began to grow importantly in the early 2000s, and the steepest growth is achieved by Mexico. The United States is the largest source of remittances to Latin America, accounting for 73 % of the inflow in 2011. As we may expect, in some of the lines we can appreciate the decrease in remittances that occurred due to the Great Recession (World Bank 2013a, b).

Mexico receives, by far, the largest amount of remittances in this region (56 %) and the amount received every year is several times what other Latin American countries received. In 2007, just before the Great Recession, remittances to Mexico peaked at 27 billion USD, before decreasing to 22 billion in 2009. Recently they have started picking up again, albeit modestly, and reached 23 billion in 2011. In Latin America, international migrant remittances represent quite varied proportions of a country's GDP. For instance, remittances to Mexico, in spite of their impressive absolute amount, represent only 2 % of Mexico's GDP, while remittances to countries like Guatemala (10 %), El Salvador (16 %), Haiti (21 %), Honduras (17 %), Nicaragua (13 %) or the Dominican Republic (7 %) represent a much more significant share of these countries' wealth (World Bank2013b).

Studies of migrant remittances have generally focused on how the receipt of remittances impacts households and communities in places of origin (Itzigsohn 1995; Sana and Massey 2005; Amuedo-Dorantes et al. 2005; see also Chap. 24 by Taylor and Castelhano in this volume). In many Latin American countries the allocation of resources from migration into land and property acquisition, as well as small business ownership has become an essential force in alleviating the effects of governmental and private investment neglect (Orozco 2003). We have

learned from previous research in Latin America that migration is a strategy for households to overcome market failures by making an investment in the migration of one of its members. When the migrant member starts remitting, the household recovers its investment and the new income can be used to finance different family projects (Stark and Lucas 1988; Stark and Taylor 1991; Massey et al. 2002; Sana and Massey 2005; Goldring 2004; Kritz et al. 1992; Itzigsohn 1995). In these households, after basic needs are met, remittances are more likely to be used for housing. And in many cases, once households are able to overcome their most essential economic constraints, there is potential for productive investment (Taylor 1992; Massey et al. 2012), especially in places with greater local economic opportunities (Lindstrom 1996).

In a study of rural Mexico, Taylor found that migrant remittances have both indirect short-term effects and long-term asset-accumulation effects on the level and distribution of household farm income in origin communities (Taylor 1992; Taylor and Wyatt 1996; see also Chap. 24 by Taylor and Castelhano, in this volume). In Guatemala, migrant remittances were initially used to purchase basic goods such as food and clothing, but after that, some families started spending the extra money on consumer items such as televisions, and other electrical goods (Smith 2006). For some rural Guatemalan communities, remittances resulted in significant changes in land distribution, because they were used to buy land for cattle pasture or maize farming, and allowed indigenous migrants to overcome ethnic socioeconomic disparities and to participate in agricultural businesses (Taylor et al. 2006). In Ecuador, Jokisch (2002) found that non-migrant households were not able to increase their landholdings, whereas most international migrant households were able to do so by an average of 36 %. In this particular case, migrant households had similar land use patterns than non-migrant households; however land owned or managed by migrant households remained in a somewhat steady state of cultivation. Existing evidence across the region consistently shows that remittance income is particularly important in rural areas because it helps increase productivity and investments in agricultural assets such as land, cattle, technology and other farming inputs. This is especially true when the household receives international remittances. Internal migration remittances, by contrast, are more likely to be treated as regular income (Massey et al. 2012; Jokisch 2002; Orozco 2003). Additionally, research on the impact of remittances in communities of origin has found that in communities of origin, the influx of remittances generates a demand for goods and has a multiplier effect on the local economy, additional examples of this can be found in Taylor and Castelhano (Chap. 24), in this volume (Orozco 2003; Agunias 2006).

In a comparative study of six Latin American countries – Mexico, Costa Rica, the Dominican Republic, Guatemala, Nicaragua and Peru – Massey and colleagues (2012) found that remittances are quite significant to the overall income of households in communities of origin by comparing the annualized amount of remittances and migrant savings as a ratio of GDP per capita. In three of the countries studied – Nicaragua (1.70), Costa Rica (1.22) and Peru (1.20) –, the financial return for a year of work in the U.S. exceeded the country's per capita income, in Guatemala annual remittances were almost equal to annual income (0.91). And in the other two countries, Mexico and the Dominican Republic, remittances accounted for a smaller proportion of income (57 % and 45 % respectively). As many others have concluded before them, international migration gives families in developing countries access to significant economic resources to help them overcome local economic constraints (Orozco 2002; Massey et al. 2012).

Furthermore, it is important to point out that the positive effects of remittances are not only seen at the household level, communities of origin in Latin America have also benefited from the use of pooled migrant savings, also known as "collective remittances," for community development projects, such as the financing of infrastructure or the construction of clinics, schools and churches, and even fundraising for disaster

relief support (Levitt and Lamba-Nieves 2011; Goldring 2004; Orozco 2002; Durand et al. 1996). Migrant organizations, also known as hometown associations (HTAs), are set up by migrants at places of destination and connect migrants back to their communities of origin through their social networks. In places like Mexico these grassroots support for community projects has become part of the national policy toward international migrants. Since 1999 the federal, state, and local governments match the funds raised by the HTAs and have successfully financed a diversity of public projects throughout the country (Guarnizo 2003; Goldring 2004; Orozco and Lapointe 2004; Agunias 2006). In 2005, Mexican HTAs raised about 20 million dollars for development projects, an amount matched with 60 million dollars from the Mexican government (Orozco and Rouse 2007). Besides Mexico, HTAs have supported local development projects in other Latin American countries like El Salvador, Guatemala, Ecuador, Nicaragua and Honduras (Guarnizo 2003; Villacres 2013; Orozco and Rouse 2007).

Lastly, the impacts of migration on Latin America are not restricted to economic effects. Demographers have found that migration also has significant impacts on other sociodemographic outcomes, such as education, fertility, mortality and health. Previous studies have found both positive (Amuedo-Dorantes and Pozo 2010; Cox and Ureta 2003; Hanson and Woodruff 2003; Borraz 2005) and negative (Kandel and Kao 2001; Miranda 2007; Kandel and Massey 2002; McKenzie and Rapoport 2011; Creighton et al. 2009) impacts of migration on the educational attainment of children from migrant households and communities. Other research has documented a positive relationship between migration and the nutritional status of children in households receiving remittances (Anton 2010), the use of maternal health services (Lindstrom and Munoz-Franco 2006), the diffusion of contraceptive knowledge in the community and fertility outcomes in migrant households (Lindstrom and Munoz-Franco 2005; Lindstrom and Giorguli Saucedo 2002), as well as improvements in child health and infant mortality (Kanaiaupuni and Donato 1999; Donato and Duncan 2011; Hamilton et al. 2009), among other outcomes. However, a great proportion of this research has been conducted in Mexico and Central America, so further research is still needed to corroborate some of these socioeconomic and demographic impacts of migration in other Latin American subregions.

Indigenous Population and Migration Settlement

Most of our knowledge on indigenous migration patterns, trends, and levels is based on ethnographic investigation, analyses of aggregate census data or small-scale studies (Rabell and Murillo 2006; López Villar 2005). Nowadays, in spite of the long migration tradition of indigenous population to urban areas, and more recently to metropolitan and international destinations, there is an absence of survey data on migration designed to be representative of the indigenous population. In the case of Mexico, for instance, the study of indigenous migration has been largely ignored by social demographers (Rabell et al. 2007).

In the 1980s, economic crises, adjustment programs and austerity measures were accompanied by a diversification of the migrant stream from Mexico, with urban areas and new regions participating in international migration flows (Canales 2003). International migrants were no longer primarily agricultural workers in Mexico or in the U.S., but are increasingly coming from urban and even metropolitan regions (Corona and Tuirán 2001). As a result, the demographic profile of international migrants has diversified since urban migration streams are more heterogeneous in their social composition than rural migration streams (Fussell 2004; Lozano-Ascencio 2003).

In addition to a greater heterogeneity in migrants' geographic and social origins, the last 20 years have also witnessed an ethnic diversification in the composition of international migration flows from Mexico to the U.S. (Rodriguez

2008). Indigenous peoples have been present in migration flows to the U.S. at least since the *Bracero* Program (Yescas 2008; Fox 2006), with P'urepecha peoples migrating to the southern United States in the 1940s. As in other rural communities, the *Bracero* Program encouraged inhabitants of impoverished indigenous areas from Southern and Western Mexico to travel in search of employment opportunities in agricultural areas on the West Coast of the United States. Even though indigenous peoples took part in this program, their experience cannot be distinguished from other rural migrants (Fox and Rivera Salgado 2004). It is not until the 1980s that the indigenous population started to increase their presence in international migration flows. As new indigenous groups have joined this migration stream, regions of destination have also diversified (Adler 2008; Fox 2006; Burke 2004; Schmidt and Crummett 2004).[1]

For some scholars, the increasing economic stratification in both Mexico and the United States associated with globalization and neo-liberal economic policies, and the changing U.S. immigration policies, constitute the macro-structural background that explains the growing presence of indigenous farm-workers in the most labor intensive crops in the United States (Blackwell et al. 2009; Fox and Rivera-Salgado 2004). In particular, with Mestizo farm workers gaining legal residence under IRCA and improving their access to social mobility opportunities, indigenous people started to take up low-paid job previously occupied by undocumented migrants, thus inaugurating a new cycle of ethnic replacement (Stephen 2001). Employers have also contributed to the growing presence of indigenous migrants in international migration streams by recruiting more and more laborers from remote and isolated indigenous communities (Fox and Rivera-Salgado 2004).

[1] According to Fox (2006), Mexican indigenous migrants are now found in California, Texas, New York, New Jersey, Florida, North Carolina, Oregon, and Washington.

Other international migration flows where indigenous migrants are present are the Maya from Guatemala, the Mixtecs from Mexico, Quichua-speaking migrants from Ecuador, and the Garifuna from the Caribbean coast of Central America. All of these groups have migrated and settled down in the United States (Rodriguez 2008).

Internal and international migration can also result from forced displacement prompted by natural phenomena or human activities that threaten the security of indigenous peoples in their places of origin. Forced migration because of natural phenomena include any movement due to natural disasters or progressive environmental degradation (such as erosion, deforestation, drought), while displacement associated with human activities refers to development projects, armed conflict, and governmental policies (Yescas 2008).

The displacement of indigenous groups due to armed conflict is of growing concern and affects the future recognition of indigenous land rights over territories los during conflict. During the civil war in Guatemala (1960–1996), members of the indigenous communities were forcefully displaced from their territories and settled down in Mexican territory.

Of special interest is the movement of indigenous peoples from the same indigenous group within their ancestral territory, across international borders. During the decolonization period and with the establishment of modern nation-states and the drawing of international borders, communities of the same indigenous group live now on opposite sides of a border (Rodriguez 2008). These communities face policies that limit their free passage and access to their lands, threatening the sustainability of their livelihoods. International borders and state sovereignty have severely curtailed and eroded their rights to free passage within their territories, and restricted or limited citizenship rights. The trans-border experience affects, among others, the Guayami of Panama and Costa Rica; the Aymara and Quechua of Bolivia, Ecuador, and Peru; the Maya of Guatemala and Mexico; and the Tohono O'odhma of Mexico and the United States (Yescas 2008).

The Growth of Large Cities and Migration

The growth of cities in Latin America is closely related to Import Substitution Industrialization (ISI) policies established in the mid-Twentieth Century. This period was characterized by rapid urbanization, mostly in one or two cities in each country where industrial production was concentrated. Economic growth in these areas contributed to the establishment of core cities in the continent, and these cities became the primary urban destinations for migrants from all over the country (Portes and Roberts 2005). Urban population growth was accompanied by increasing pressure on land and housing, as well as on the provision of public services in cities. Despite the challenges of urban growth, for the most part, rural to urban migrants gradually gained access to industrial employment and relative upward mobility (Portes and Roberts 2005; Balán et al. 1973; Solis and Billari 2002).

The end of the ISI period and the opening of markets to foreign trade, as well as the adoption of neo-liberal policies, brought an end to the primacy of core cities and fostered the development of new poles of economic growth tied to export-oriented industries (Pérez Campuzano and Santos Cerquera 2008). This change in production structures transformed urban labor markets and the geographic distribution of population. Deregulation and privatization caused a decline in the public sector, and with it, a decline in middle-class employment. These structural changes had negative consequences for Latin American cities, which saw an increase in poverty and inequality, as a result of the changes in production and economic policies (Balán et al. 1973; Cortés and Latapí 2005).

By the early 2000s, many countries in Latin America had a predominantly urban population, with the proportion urban ranging from 73 % to 76 % in Peru and Mexico, respectively, to 89 % and 91 % in Argentina and Uruguay, respectively (Portes and Roberts 2005). Many of the large cities in Latin America, like Sao Paulo, Rio de Janeiro and Mexico City concentrated a large share of the total urban population of their respective countries during the ISI period, but by the 2000s all of these urban areas had decreased in primacy, i.e. the share of the nation's urban population was not so overwhelmingly dominant. Some of the reasons for this decline are related to smaller flows of rural-urban migrants, an increase in urban-urban flows, lower fertility rates in urban areas, and labor market changes related to export-oriented industry. Lima, Peru may be the only exception of a city that retained primacy (Portes and Roberts 2005; Pérez Campuzano and Santos Cerquera 2008).

A good example of decreased primacy of the main urban area and industrial growth in other areas of the country is the case of the Mexican northern border region. Since the 1960s the Mexican Border Industrialization Program brought thousands of manufacturing jobs to border cities, these factories employed cheap labor to produce goods for the U.S. market. These *maquiladora* jobs significantly increased the sizes of border cities like Tijuana and Ciudad Juarez. Similar decentralization of manufacturing activities also occurred countries like Chile and Brazil (Cortés and Latapí 2005; Portes and Roberts 2005).

In the case of Mexico City, internal migration played an essential role in the redistribution of urban population. First, during the industrialization-oriented phase, rural to urban migration moves increased the primacy and the population size of Mexico City, then, in more recent decades urban to urban migration increased, mainly going from Mexico City to other urban areas in the country (Pérez Campuzano and Santos Cerquera 2008). Previous research shows that between 1995 and 2000, about 35 % of moves were to mid-size cities, while 29 % went to large size cities, in this period almost half of moves occurred between cities (Anzaldo 2003).

These changes in population distribution have been associated with increasing unemployment and employment in informal sector work. Social

inequality also increased dramatically as a result of the new economic model. In places like Argentina, Brazil and Mexico, while the wealthy consolidate their position at the top of the social ladder, the economic situation of lower classes has stagnated and even continues to deteriorate (Portes and Roberts 2005).

The 1990s were a period of both economic instability and greater integration into the global economy in Latin America. On one side, this period saw significant economic crises, but on the other side, it also brought increases in foreign investment, a more dynamic foreign trade, as well as pro-austerity measures aimed at reducing the role of the government in the economy. These policy and economic changes in most Latin American countries were reflected in the composition of their economic sector and their labor markets. In the decade prior to 2000, most countries saw a decrease in manufacturing and commercial activity alongside increases in the services sector, which, in many countries, included a sizeable informal economy sector (Portes and Roberts 2005). The growth of the services industry and the informal economy, particularly in larger urban areas, has been responsible for increasing the polarization of the labor market, where the main contrast was evident between production jobs that required a more skilled labor force and tended to be better paid, and those jobs in the services industry where there is less job security and lower wages. Now about three-quarters of the population of Latin America and the Caribbean live in urban areas (Fay and Laderchi 2005). Given the economic changes discussed above, and the inability of cities to deal with increasing population have resulted in insufficient supply of housing and basic infrastructure, a lack of adequate services, and a generalized decrease in the well being of the most vulnerable urban dwellers. In absolute terms, more than half of the poor in the region live in urban areas, and if the rates of urbanization continue as they have been in recent decades we can only expect that this proportion will increase (Fay and Laderchi 2005).

Political Conflict, Violence, and Internal Displacement

In the history of migration in Latin America we find numerous instances where political or military conflict has caused international migration and the internal displacement of the population. Some examples of this migration include Europeans going to Latin American countries to escape civil war, such as in case of Spanish Civil War refugees who primarily migrated to Mexico, Chile and the Dominican Republic (Durand and Massey 2010). But perhaps the largest share of conflict migration has come from within the region. In the second half of the Twentieth Century many countries in the region experienced civil unrest, coups d'état, and dictatorships (Wood et al. 2010; Durand and Massey 2010). Unrest in countries like Cuba (1959) Guatemala (1960–1996), Argentina (1976–1980), Brazil (1964–1985), Nicaragua (1961–1990), Uruguay (1973–1976) and Chile (1973–1995) created a consistent flow refugees, political asylum seekers, and other internationally displaced migrants who fled to other Latin American countries as well as to the United States, Canada and Europe. Many others, especially those displaced by civil war and guerrilla conflicts in Central and South America were internally displaced (Wood et al. 2010). For instance during the 36 years of Guatemala's civil war, thousands of political refugees went to Mexico, Canada and the United States, and is estimated that between half a million and 1.5 million people were displaced internally (Smith 2006; Morrison and May 1994; Internal Displacement Monitoring Centre [IDMC] 2011). Conflict in El Salvador and Nicaragua also created a similar exodus of political refugees and internally displaced people. In the 1980s about two million Central Americans were displaced by these conflicts, though the United Nations High Commissioner for Refugees (UNHCR) only recognized about 150 thousand of those (Castles and Miller 2009). The violence and strife caused by armed rebel movements in rural

Colombia is estimated to have caused the internal displacement of at least three million people, or 30 % of the country's population (Wood et al. 2010; IDMC 2011). The United States is also a common destination for refugees from Haiti and Cuba, who often try to reach the U.S. by boat (Castles and Miller 2009).

In recent years, violence and crime have come to be seen as the main problem in contemporary Latin America (Davis 2006), and an important consequence of fear and insecurity is increased migration – or the desire to migrate – to the United States or Europe in search of safety and stability. Protecting family members form violence and crime has become an additional incentive for migration in the region, beyond the commonly discussed economic motivations. According to survey estimates from 17 countries between 2002 and 2004, the proportion of people who reported crime victimization was 39 %, though there is important variation between countries, with this estimate ranging from 25 % in Panama to 68 % in Mexico (Wood et al. 2010). Despite the growing importance of this issue, empirical evidence of the connection between crime and migration is still scant, though Wood and colleagues (2010) did find a significant relationship between crime victimization and a respondent's desire to emigrate to the United States among Latin Americans in the 17 countries in the sample; however this study does not test whether people actually end up undertaking a move abroad. Findings like this are important to start a discussion on the issue, which has become ever more important in recent years as drug and gang violence have ravaged many communities in the region, most notably in Mexico, Central America and Brazil. Future work will need to be undertaken to unveil if there is indeed a connection between violence, crime and migration.

The Mexico-US Migration "System"

Perhaps the most notable migration system in the Latin American region is the one between Mexico and the United States. This system is remarkable because of its long history, large scale, and complex political circumstances (Massey et al. 2002). Mexican labor migrants have been going to the U.S. for more than century now and make up the largest group of contemporary immigrants in the U.S. In 2008, at the peak of the Great Recession, almost 13 million Mexican-born immigrants were living in the U. S., accounting for 32 % of all immigrants living in the country. Furthermore, it is estimated that more than half of the Mexican-born population is in the U.S. without authorization (Pew Hispanic Center 2009; see Fig. 18.2).

Even though migration from Mexico to the U.S. can be traced back to the Nineteenth Century when the current border between the two countries was established, it was through the Bracero Program (1942–1964) that the northbound flow of Mexican workers became established. The Bracero Program was a guest worker program that recruited young men to travel to the U.S. for temporary work, mostly in agricultural jobs. In its 22 years, the program gave employment to about 4.6 million Mexican workers, though in the same period, almost as many undocumented workers came to work the U.S. without the auspices of the program (Durand and Massey 2003; Durand 1994; Calavita 1992). When this guest worker program ended in 1965, the need for Mexican workers did not end, and the flow of migrants simply transformed from a government-regulated option into a social practice that combined a few documented migrants with a massive influx of undocumented workers (Durand et al. 1999; Durand and Massey 2003).

Between the 1960s and the 1980s, labor migration to the U.S. became a widespread activity in many communities in the Central and Western regions of Mexico (Verduzco 1995; Durand et al. 1999). Although there were a few legal workers, specifically those *braceros*[2] who were given working permits at the end of the program, most Mexican migrants traveled to the

[2] The word *bracero* derives from the Spanish word for arm, *brazo*, and it can be loosely translated as "farmhand" (Massey et al. 2002; Calavita 1992).

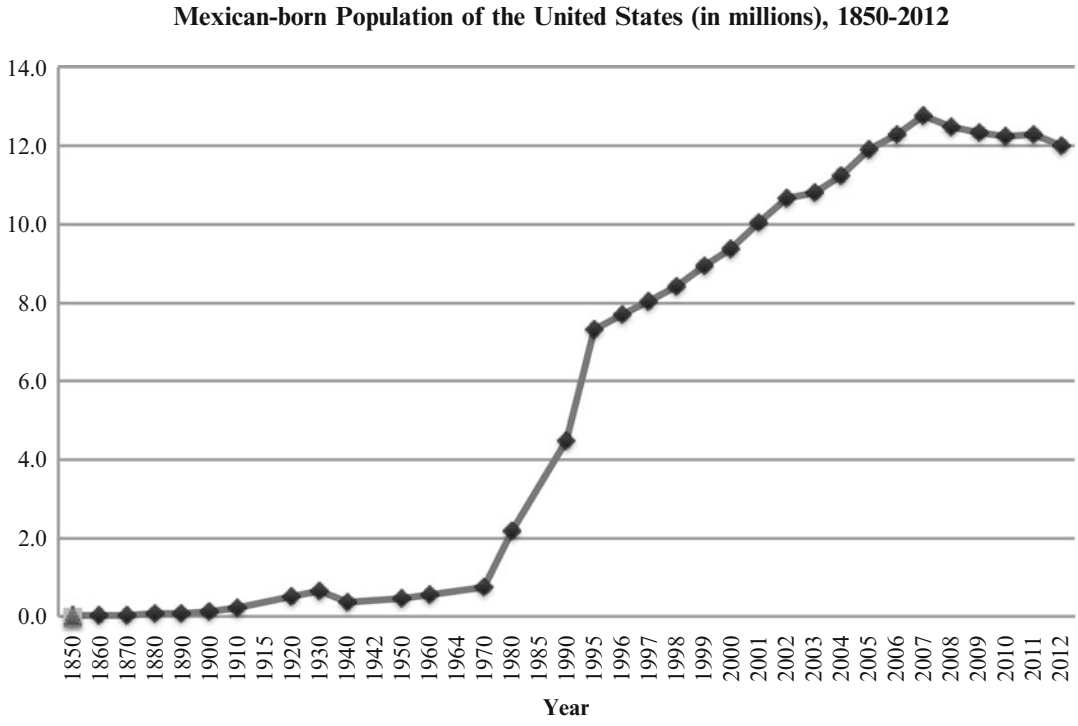

Fig. 18.2 Mexican-origin population in the U.S., 1850–2012 (Source: Calculations by Pew Research Center. Updated version of Fig. 1.1 from Passel et al. 2012; estimates for 1990–2012 consistent with Passel et al. 2013)

United States without proper documentation (Massey et al. 2002; Durand et al. 1999). At the time, most of these undocumented migrants crossed the border by themselves, or along with friends and relatives who already knew the way. The use and cost of paid guides, or *coyotes*, grew as border enforcement and security increased (Cerrutti and Massey 2004). In fact, the process of international migration in this era closely resembled internal migration, where young, less educated agricultural workers would go back and forward to the U.S. for seasonal work without too much concern for the possibility of apprehension at the border (Durand and Massey 2003). The period is also characterized by the lack of explicit government intervention to regulate migration in both countries (Durand 1998; Massey et al. 2002).

The severe economic crises Mexico experienced in the 1980s had a big impact on the socioeconomic status of Mexican families; as inflation rose, real wages decreased, employment conditions became more precarious and the informal economy grew significantly (Canales 2002; Cortés and Escobar Latapí 2005). Under these conditions, the demographic profile of migrants to the U.S. became more diverse, as many more of them came from urban areas, had higher levels of schooling, and occupations other than agriculture. In the following decades, these migrants would find their way to urban areas in the U.S. to work in manufacturing, construction, and services (Canales 2002; Durand 1998).

It was in the 1980s that Mexico-U.S. migration began to be subject to governmental intervention on the American side. In the U.S., immigrants were blamed for stealing jobs from natives and being a fiscal burden, while border security and enforcement became a growing concern (Massey et al. 2002; Durand 1994). In 1986, the U.S. Congress passed the Immigration Reform and Control Act (IRCA) which established sanctions for employers who hired undocumented workers, strengthened border

control, gave amnesty – with specific conditions – to those who could demonstrate 5 years of migration or residence experience in the U.S., and established a special program to legalize agricultural workers (Durand 1998; Massey et al. 2002; Durand et al. 1999). Between 1986 and 1995 about 2.7 million Mexicans had obtained legal residence through the law's provisions and, through family reunification policies, whole families had access to permanent residence and settled in the U.S. (Durand 1998; Durand et al. 1999). As a result of these policies, IRCA had important consequences for the demographic profile of Mexican migrants in the U.S. For instance, because of family reunification policies, more women and children came to the U.S. In addition, due to increased border security and rising costs of border crossing, fewer migrants continued their circular or seasonal pattern of migration, choosing instead to remain in the U.S. for longer periods of time, and even to settle permanently in the country (Verduzco 1995; Durand 1998; Massey et al. 2002).

In addition to changes in the demographic pattern of migration, its geography changed dramatically in the period post-IRCA. In 1990, 67 % of migrants came from rural areas while, by 2000, half of the Mexican migrants came from urban areas (CONAPO 2000; Canales 2002). Sending areas were traditionally concentrated in states in the center-west region of the country, but the 2000s migration had increased significantly in states in the center and south of the country, particularly in places like Oaxaca, Puebla, Veracruz, Mexico State and the metropolitan area of Mexico City (Canales 2002; Durand and Massey 2003). To get a better idea of the geographic distribution of migration in Mexico see the maps in Figs. 18.3 and 18.4 which show the degree of "migration intensity" by municipality in 2000 and 2010 respectively. The degree of migration intensity is measured by a composite variable that uses Census information on the numbers of migrants and households that receive remittances to rank municipalities according to their level of involvement in the migration flow to the U.S. (CONAPO 2000, 2010). The areas with darker colors show the municipalities with higher levels of migration, while the lighter areas are those with lover levels of migration. The map for 2000 shows a pattern of migration prevalence that is more consistent with the historic regions of origin of Mexican migrants in Central and Western Mexico. The map in 2010 shows some darkening in new areas of origin, mainly in the center, south and north areas of the country.

With the increased border enforcement established by IRCA and strengthened after 9/11, the crossing of Mexicans back and forth became less common. The law included provisions for a significant increase in the budget allotted to the Border Patrol, an amount that has only increased further in the past couple of decades (Cerrutti and Massey 2004; Massey et al. 2002). Spending for U.S. Customs and Border Protection (CBP) and U.S. Immigration and Customs Enforcement (ICE) surpassed 17.9 billion dollars in 2012, which is – controlling for inflation – about 15 times the pre-IRCA spending of the U.S. Immigration and Nationalization Service and 24 % more than the spending for the Federal Bureau of Investigation, Drug Enforcement Administration, Secret Service, US Marshalls Service, and Bureau of Alcohol, Tobacco, Firearms and Explosives combined (Meissner et al. 2013). As a result of these changes in border and immigration enforcement, the number of deportations – termed "removals" under contemporary US immigration policy – carried out has grown considerably in the past few decades.[3] For instance, in 1990 there were just over 30 thousand, in 2000 the number grew to 189 thousand, and by 2011 this number had

[3] The Department of Homeland Security defines removals as "the compulsory and confirmed movement of an inadmissible alien out of the United States based on an order of removal. An alien who is removed has administrative or criminal consequences placed on subsequent reentry owning to the fact of the removal." In contrast, voluntary return is simply "the movement of an inadmissible or deportable alien out of the united States not based on an order of removal." For the purposes of this chapter, we use deportation and removals/voluntary return interchangeably (Simanski and Sapp 2012).

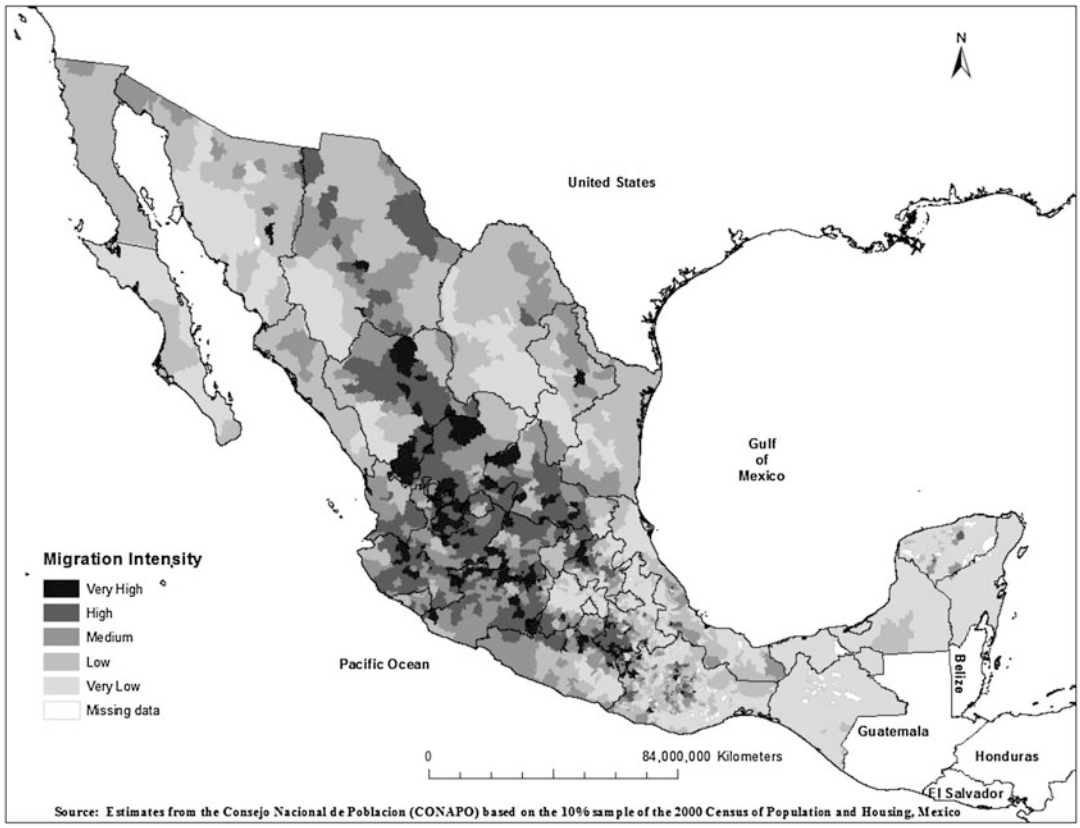

Fig. 18.3 Geographic distribution of migration to the U.S. by municipality in Mexico, 2000

reached a record 392 thousand deportations, the vast majority of which were of Mexican and Central American migrants (Meissner et al. 2013; Simanski and Sapp 2012).

With stricter border enforcement, the probabilities of apprehension increased, and the costs of crossing the border increased accordingly, as a result, those who make it in are more likely to stay in the U.S. for longer periods of time. As a result of all these changes, in a relatively few years, the overall pattern migration changed from a circular flow of labor migrants to a more permanent settlement of immigrants, less likely to return given the costs and risks border crossing (Cerrutti and Massey 2004).

Despite the significant growth of migration during the 1990s and early 2000s, according to several sources of data from both Mexico and the U.S., the massive flow of migrants may have stopped in the years after the Great Recession. Analysis of recent data has shown a net migration rate close to zero, and some data even suggests a negative net migration rate (Passel et al. 2012; Cave 2011; Castañeda and Massey 2012; see Fig. 18.2). According to these calculations, the annual migration from Mexico to the U.S. has gone on a steady decline from its peak at 770 thousand people in the late 1990s to about 140 thousand in 2010. Moreover, according to data from the Mexican Census, twice as many Mexicans returned to the U.S. between 2005 and 2010 than in the 5 years prior to 2000. Besides, there has been a steady increase in the number of repatriations (including both removals and voluntary departures) – about 282 thousand in 2012, compared to 176 thousand in 2004 – as well as a shift in the nature of deportations (Passel et al. 2012). Prior to 2008, most deportations occurred at the border itself, while in recent years, more deportations originate inside of the

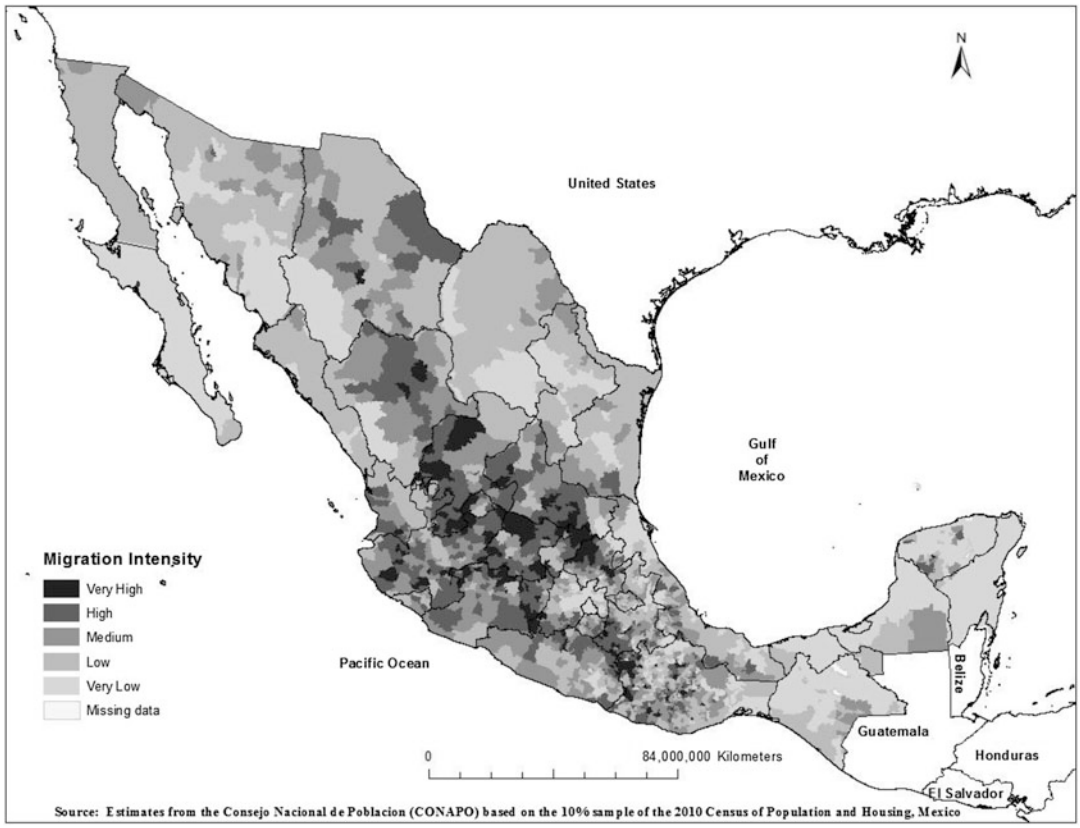

Fig. 18.4 Geographic distribution of migration to the U.S. by municipality in Mexico, 2010

United States territory, some even at the homes or workplaces of migrants (Passel et al. 2012; Simanski and Sapp 2012).

In addition to these changes in the migrant patterns of the undocumented population and the declining inflow of new undocumented Mexican migrants, there has been a significant increase in legal migration from Mexico to the U.S. The current landscape already reflects the transformation in patterns of migration, and the trends we are seeing right now may offer a glimpse to the future. To give an example of the growth in legal migration through work visas, in the late 1990s only a couple of hundred skilled Mexican workers came to the U.S. through the NAFTA professional worker visas, by 2004, the number had increased to about 900 Mexicans, and since then the growth has been rapid and steady so that by 2012 about 7600 skilled Mexican workers received these type of visa to work in the U.S. (CONAPO 2013). We should highlight that these numbers do not include any of the other modalities of work visas, such as the much larger H visas for needed occupations, which have also grown importantly. In 2011, non-immigrant temporary admissions for workers and their families were almost 700 thousand, just for Mexico. Of these, 175 thousand were in the seasonal agricultural worker category, 140 thousand in the treaty traders and investors category, and 62 thousand were seasonal non-agricultural workers (U.S. Department of Homeland Security 2012). The large proportion of trade and investment visa category travelers is notable, and it may be an indication of the future of Mexican migration to the United States.

The decrease in in-migration and the increase in return migration have been attributed to the recession and the slowdown of the construction

industry, as well as to increased border enforcement and deportations (Parrado 2012; Passel et al. 2012). On the Mexican side, a decline in out-migration may be related to changes in the demographic structure of the population and a relative improvement of economic conditions in the country (Passel et al. 2012; Cave 2011). The question that remains is whether a recovery of the American economy will cause migration to eventually resume, or whether the era of massive Mexican migration is over. Recent estimates show a small uptick in the unauthorized immigrant population in 2012 (see Fig. 18.2; Passel et al. 2013), and remittances to Latin America appear to have increased in 2013, though this recovery does not seem to have occurred for Mexico (Cohn et al. 2013). At this point, it may be too soon to tell, most recent estimates are preliminary and we do not know yet if they are a reflection of a more sustained growth in undocumented immigration.

In addition to trying to get a better understanding of the new dynamics of migration between the U.S. and Mexico, a new research concern is related to the returned and removed population. During the Great Recession and due to the increase in enforcement and removals, large numbers of undocumented migrants and families returned to Mexico, in many cases, including their U.S. born children. More research will be needed in the next few years to gauge the impact that deportations and voluntary returns may have had in the places of origin of migrants, as well as the consequences of this return on the well being of U.S.-born Mexican children.

Looking to the Future

Key Research Questions for Current Scholars and Policy

As discussed above, the Great Recession, enhanced border enforcement and the recent increase in deportations have resulted in higher rates of return to places of origin and lower rates of undocumented border crossing to the United States. These developments in the largest migration system in the region will have important consequences for future research priorities. The effects of the economic downturn on European economies also had a negative impact in the rates of Latin American migration to the region. As we have mentioned above, in recent years, many migrants from Mexico and Central America have been deported (termed "removals" by US immigration policy) or have decided to voluntarily return to their places of origin. In the case of those being deported, they are often dropped off in Mexican cities across the border and not necessarily in the places where they are from. Urban areas in the border have seen an unusual influx of people struggling to make their way back home – regardless of whether 'home" means their community of origin in Mexico or the U.S.– and people deciding to stay near the border for the time being. Another important issue to consider is that many of the migrants returning to their places of origin do so along with their U.S.-born children either by deciding to go back home voluntarily, or by having their families join them after being deported.

We believe that as a consequence of these important changes, some of the key areas for research in the future should pay attention to, (1) analyses of the population returning and being deported back to Latin America, (2) evaluations of the impact of the inflow of deportees to border cities in Mexico, (3) studies of the population that stayed behind in the U.S., particularly to understand the potential selectivity of those who chose to not return home compared to those who did, and (4) extensive research should be done on the U.S.-citizen children accompanying their parents in their return to their places of origin, specifically on issues such as children's incorporation into the educational system and generally to the society where they now live. Special attention should be given to the policies and interventions needed to aid them in their transition to the local society. Furthermore, this population of U.S.-citizen children should be followed into the future to see how they fare in their parents' places of origin or whether they would choose to eventually return to the U.S.

In addition to the changes brought by return migration and deportation, recent efforts toward comprehensive immigration reform have had little or no results. However, despite the stalling in efforts for legal reform, perhaps one of the most important developments in migration policy of recent is the Deferred Action for Childhood Arrivals (DACA). In June of 2010 President Obama issued this executive order to stall deportations of young undocumented migrants, DACA allows eligible migrants to defer deportation action and become eligible for temporary work permits (for more detailed information on DACA's eligibility and regulations consult the United States Customs and Immigration Services website: www.uscis.gov). Given that a large number of the undocumented migrants in the U.S. come from Latin American countries, future migration research in the region should explore the impacts of DACA on the life trajectories of young undocumented migrants, and the impacts of not receiving deferred action for those who are not eligible for DACA.

As we also discussed above, while undocumented migration has declined, there has been an increase in legal migration, especially from Mexico. Future work should consider exploring the profile and characteristics of this growing inflow of migrants. The characteristics of this population are likely quite heterogeneous since some of these migrants are wealthier business immigrants who are hoping to escape the drug violence in certain regions of Mexico, while others are temporary workers coming to the U.S. to engage in a specific type of skilled or unskilled employment.

Despite the decline in undocumented arrivals, there are still almost 12 million undocumented immigrants in the U.S., of which more than half are Mexican and about a quarter are from other Latin American countries (Passel et al. 2013; Van Hook et al. 2005). Generally, and perhaps because of its sheer population size, discussion of undocumented migration is limited to Mexicans, we believe there is need to return to more systematic research on the numbers, profile and patterns of undocumented migration from countries other than Mexico. We still need to know to what extent what we have learned about the Mexican undocumented population can be generalized to other unauthorized migrants from Latin America.

In addition to understanding patterns of undocumented migration to the U.S., future research should explore the migration of Central Americans to Mexico, many of these come to Mexico with the goal of crossing the border into the U.S., but sometimes because they have been unsuccessful or they require additional resources to reach and cross the border, they stay as labor migrants within Mexico. This relatively recent flow of migration may be the start of Mexico's transition from a sending country into a destination country. Immigration to Mexico also comes from countries all over the world. Migrants appear to be attracted by the recent improvements in the Mexican economy (Cave 2013). These trends of immigration into Mexico have not been yet explored systematically so it would be an interesting and unique area for future research.

In addition, more research should be done with regard to the impact of the recent decline in remittances on the communities and families of origin of migrants. A large portion of the literature has devoted to understanding the impact of remittances on the development of places of origin. However, as we discussed above, increased border enforcement in the U.S. has resulted in long-term settlement of more Latin American migrants in the U.S. (Massey et al. 2002), as well as in a decline of undocumented migration (Passel et al. 2013). In addition to fewer migrants coming into the U.S. there has been an increase in return migration to Latin America. All of these trends make us wonder whether the large flows of remittances from the U.S. some countries were accustomed to may be a thing of the past. Though some Latin American countries have seen a very recent uptick in remittances, it is still soon to tell which trend is here to stay (Cohn et al. 2013).

Data Needs

Data availability and limitations are important concerns to anyone studying migration. Oftentimes national surveys do not have the desired level of detail or richness of information on migration processes and histories, while detailed surveys of migration are often not nationally representative. Scholars of migration often find themselves having to decide between depth or representativeness, complexity or generalizability. However, despite data limitations in the study of migration, scholars working on Latin American migration have been very successful at overcoming some of these limitations and have spearheaded data collection efforts and research methodology innovations that have set the tone for research design in migration projects all over the world.

Some important efforts are those of the Mexican and Latin American Migration Projects (MMP, LAMP). These projects have collected data on Mexican migration for over 30 years and on countries like Puerto Rico, Guatemala, El Salvador, Colombia, Costa Rica, Peru, Nicaragua, Paraguay, Dominican Republic and Ecuador for the past 15 years. Data collected by these projects includes complete histories on migration, work and border crossing for household heads and their spouses, and more recently of other migrants in the household, information on the first and most recent U.S. trips for all household members with internal or international migration experience, as well as information on ownership of household assets, agricultural land and businesses and whether they were acquired with migration income (Durand and Massey 2004). These data collection efforts have had a significant impact on the migration scholarship in the region (Durand and Massey 2004, 2010), particularly through the development of their survey and fieldwork methodologies (Massey 1987). These methods have also influenced migration research projects all over the world. Some examples of projects using the MMP/LAMP methodology are the China International Migration Project (Liang et al. 2008; Liang and Chunyu 2013; http://www.albany.edu/cimp), the Moroccan Migration Project (http://www.unav.edu/evento/migraciones/moroccan), and the Ukrainian Migration Project (Strielkowski et al. 2012). We can certainly expect that as these and other projects develop and consolidate, they will provide exceptional data to study these countries and their migration systems. But most importantly, the availability of comparable international data on migration will allow migration scholars to test and develop migration theories for the Twenty-First Century.

Other initiatives like the Mexican Family Life Survey (MxFLS) have collected significant migration information. This survey is an ongoing longitudinal project, the baseline was completed in 2002 and the fist follow up was completed in 2005. Respondents who migrated to the U.S. between the first and second round were followed and interviewed in the U.S. The survey collects data on the socioeconomic status of households and individuals, as well as a detailed battery of questions on health behaviors, health services, and use of government assistance among other things. However, despite being representative at the national level, the migration information in the MxFLS does not have the level of detail of the migration histories in the MMP, and so far in waves 1 and 2 the numbers of U.S. migrants captured in their sample are small enough to create analytical difficulties.

Perhaps an important gap in current data has to do with expanding the application of migration surveys to most countries in Latin America. Current data available does not have information on all countries with meaningful migration flows. It will also be paramount that some of these projects include questions to collect data on intraregional migration, not just migration to Europe or the U.S. Additionally, the region would greatly benefit from more longitudinal data collection efforts, either prospective or retrospective.

Conclusion

This chapter presented an overview of the main trends of migration in the Latin American region; we discussed some of the important issues and historical developments related to the movement of people within and outside the region. We highlighted the complexity of the migration flows originating from Latin America, where many countries have gone from being migrant destination countries to sending migrants to other countries within and outside the region. Our review highlights the preeminence of the flow of migrants toward the United States. However, we also recognize the importance of intraregional flows and migration to other regions in the world. Perhaps with the recent decrease in migration to the U.S. we will see an increase in importance of flows within countries in the region. Future research should put emphasis in understanding these changes and the new migration configurations for the region. Of course, in this changing environment, it is of foremost important to improve our efforts of data collection, where we emphasize the use of retrospective and longitudinal methodologies, and the collection of comparable data across countries.

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Moving for Opportunities? Changing Patterns of Migration in North America

19

Amy Spring, Stewart E. Tolnay, and Kyle Crowder

Introduction

The populations of United States and Canada have historically been among the most mobile in the world, with pronounced migration streams continually reshaping the distribution of the population and producing profound and far-reaching social, economic, and political repercussions. Given these impacts, migration has remained a popular area of study in North America for close to a century. This research on North American migration has been facilitated by an unparalleled diversity of data. While the United States and Canada lack the registry data available for some Scandinavian countries, rich and regular census data, supplemental national surveys, and a wide range of longitudinal data sources have enabled researchers to describe, in great detail, the causes and consequences of ever-shifting North American migration patterns.

In this chapter we take advantage of several of these data sources to outline some of the main historical and contemporary patterns of geographic mobility in the United States and Canada.[1] Throughout we discuss how these mobility patterns have evolved over time in ways that both reflect and have shaped shifting demographic, social, and economic dynamics. We review the slow development of core theoretical arguments on migration and residential mobility and point to some opportunities to push our theoretical frameworks to a level that better matches the sophistication of our data.

Historical and Contemporary Migration Patterns

High Mobility of U.S. and Canadian Population

The United States and Canada are historically two of the most highly mobile populations in the world. In 2007, the U.S. Census Bureau estimated, based on age-specific probabilities of moving, that a person in the United States could

Partial support for this research came from a *Eunice Kennedy Shriver* National Institute of Child Health and Human Development research infrastructure grant, R24 HD042828, to the Center for Studies in Demography & Ecology at the University of Washington.

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[1] We use the term "geographic mobility", or simply, "mobility," to refer to all types of moves, "migration" to refer to long-distance moves (inter-county, inter-metropolitan area, or inter-state), and "residential mobility" or "short-distance mobility" to refer to local moves (intra-county or intra-metropolitan area).

M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_19

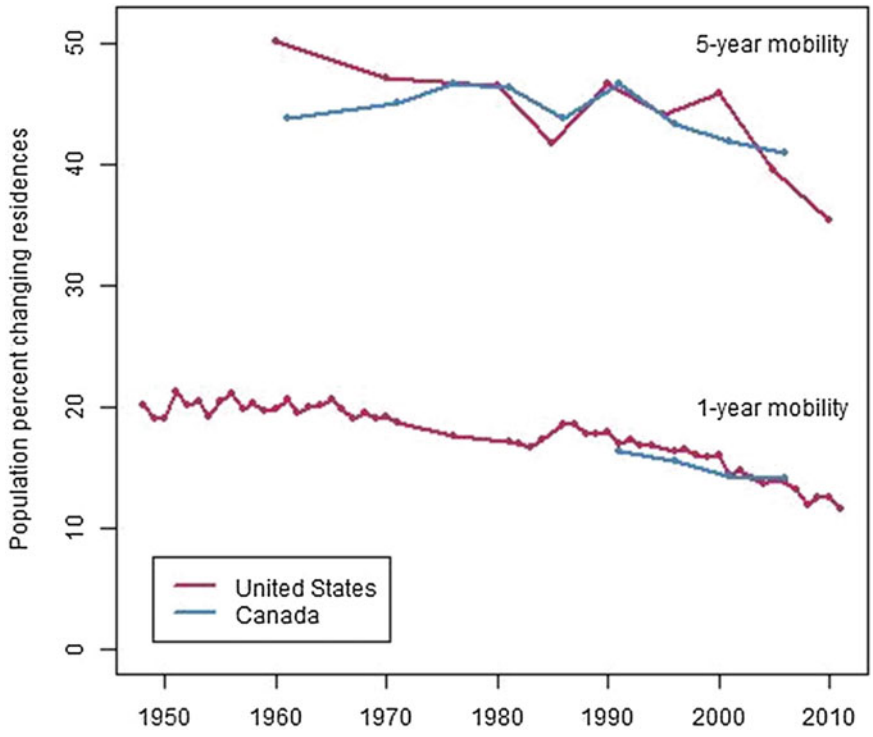

Fig. 19.1 Population percent changing residence in previous 1 and 5 year intervals in the United States and Canada, 1948–2011. U.S. data are from the Current Population Surveys (U.S. Census Bureau 1950–2010). Data are not available for 1972–1975 or 1977–1980. Data for Canada from 1961 to 1981 are from Ledent's (1990) calculations of Canadian Census data. Data following 1981 are from the Census of Canada (Statistics Canada 1981–2006). One-year mobility rates are for persons aged 1 and over at the survey date. Five-year mobility rates are for persons aged 5 and over at the survey date

expect to move 11.7 times in their lifetime (U.S. Census Bureau 2012a).[2] This expectation of lifetime moves is only slightly lower than it was almost 40 years earlier. In 1970, the approximate number of changes in residence a person could expect to make in their lifetime was 12–13 in the United States and Canada (Long 1988). This high mobility was matched only by residents of Hong Kong. Residents of Australia, Puerto Rico, and New Zealand could expect to make approximately ten moves, while residents of Japan, Great Britain, and France could expect to move only about seven times (Long 1988).

Reflecting this high rate of mobility, over 37 million Americans changed residences over the previous year in 2010, or roughly one out of ten people. In Canada, roughly 14 % of the population, or four million Canadians, changed residences in the previous year in 2006. Mobility rates were even higher in the past. From 1950 to 1970, the share of the U.S. population that moved each year hovered around 20 % before beginning a fairly steady decline (see Fig. 19.1). In Canada, annual mobility has declined every Census year since residence 1 year ago was introduced as a Census question in 1991. Five-year mobility rates, which are available for more data points than 1-year rates, increased in Canada in the 1960s, 1970s, and briefly again in the late 1980s before beginning a steady decline. Despite

[2] The American Community Survey data used to calculate lifetime mobility are based on whether individuals moved in a 1-year period. Some individuals may have moved more than once in the 1-year period. Thus, a more accurate statement is that a person could expect to make one or more moves in 11.7 years of their life, rather than the actual number of moves (U.S. Census Bureau 2012a; Long 1988).

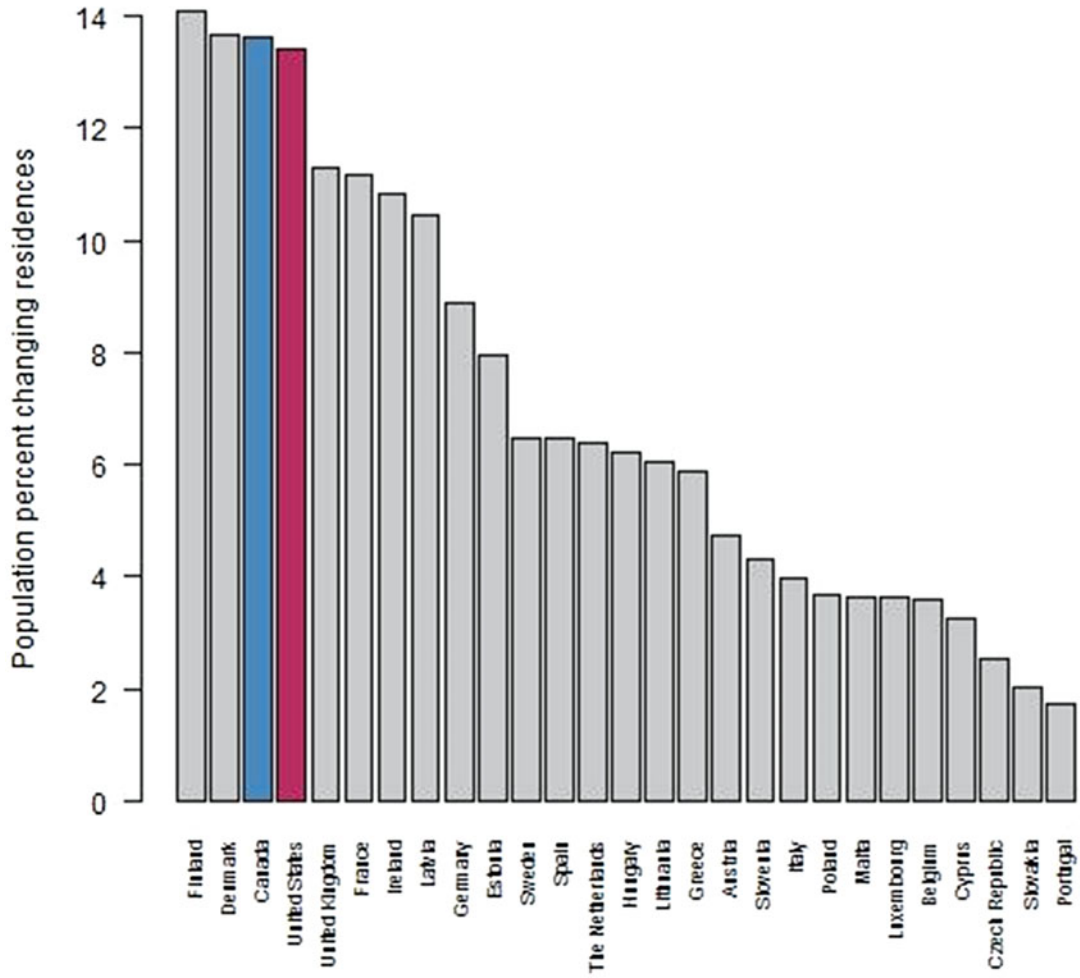

Fig. 19.2 Percent of the population 16+ changing residences in previous year by country, 2005. U.S. data are from the 2005 Current Population Survey for persons 16 and over. Data for Canada are from the 2006 Census of Population provided by Statistics Canada. Canadian totals were only provided for persons 1 and over. The rate for the Canadian population 16 and over was estimated indirectly using data for the U.S. We calculated the percentage difference between the U.S. rates for the population 1 and over and 16 and over, and subtracted the same percentage from the rate for the Canadian population 1 and over to obtain an approximate estimate of the rate for the Canadian population 16 and over. European data are from the 2005 Eurobarometer survey for persons 16 and over (Papacostas 2005). The Eurobarometer data are from a survey administered in September and October 2005, and the responses refer to mobility since the start of the year. To convert into an estimate of 12-month mobility, European rates in the figure have been multiplied by 4/3, following Molly et al. (2011)

the declines, the annual mobility of the U.S. and Canadian populations remains higher than most European countries (see Fig. 19.2).

Further demonstrating the mobility of the North American population, a large proportion of Americans and Canadians make a long-distance move at some point in their lives. In 2005/2006, approximately 7.7 % of the U.S. population and 2.9 % of the Canadian population made a long-distance move (between states or provinces) in the past 5 years. For nearly the entire twentieth century, the percent of the U.S. population living outside their state of birth increased in every decade, rising from a low of around 18 % in 1900 to a peak of 29 % in 1990 (see Fig. 19.3). Although inter-state migration

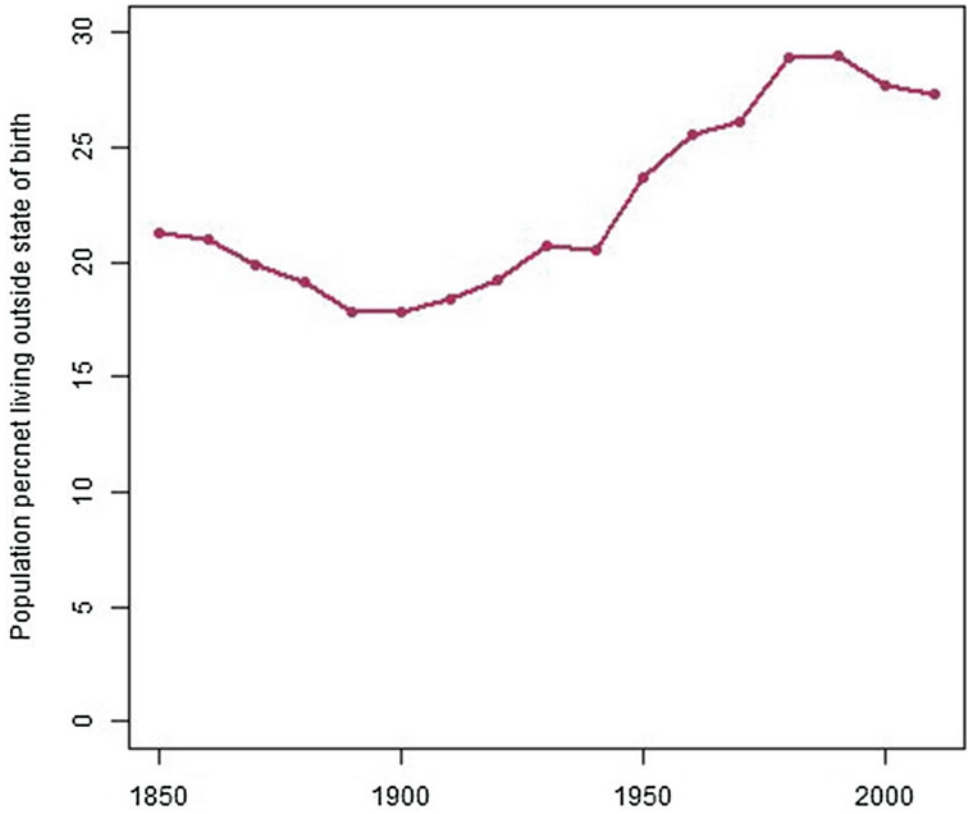

Fig. 19.3 U.S. population percent living outside state of birth, 1850–2010. Data for 1960 and earlier are from U.S. Bureau of the Census, State of Birth, PC(2)-2A, (Washington, DC: U.S. Government Printing Office, 1963), table 1 and reported in Long (1988). Data for 1970 are from the 15 % sample questionnaire and reported in Long (1988). Data for 1980–2000 are from the Decennial Census long form, and data for 2010 are from the American Community Survey (U.S. Census Bureau 1980–2010)

has declined in the last decade, approximately a quarter of U.S. citizens lived outside their state of birth in 2010. Inter-state migration in the United States is roughly 50 % higher than the average level of regional migration in the European Union (17 %), according to the 2005 Eurobarometer survey (see Fig. 19.4). Comparisons between the United States and Europe should be made with caution, due to differences in the geographic scale of administrative units across countries. However, despite the questionable comparability of geographic units, the exceptionalism of the U.S. rates are apparent.

Despite the reputation of North American populations as among the world's most peripatetic, the pace of mobility within these countries has been on the decline for decades (Fischer 2011). Following a general pattern of declining annual mobility rates that began around 1970, the percent of the U.S. population changing residence in the previous year has declined more steeply since 2001. In addition, after increasing every year for almost a century, the percent of the U.S. population living outside their state of birth declined in 2000 and again in 2010. An overview of selected major episodes of migration throughout history, at different geographic scales, provides some insights to help better understand the recent mobility declines, as well as an opportunity to assess the interaction of the migration processes with broader social and demographic dynamics.

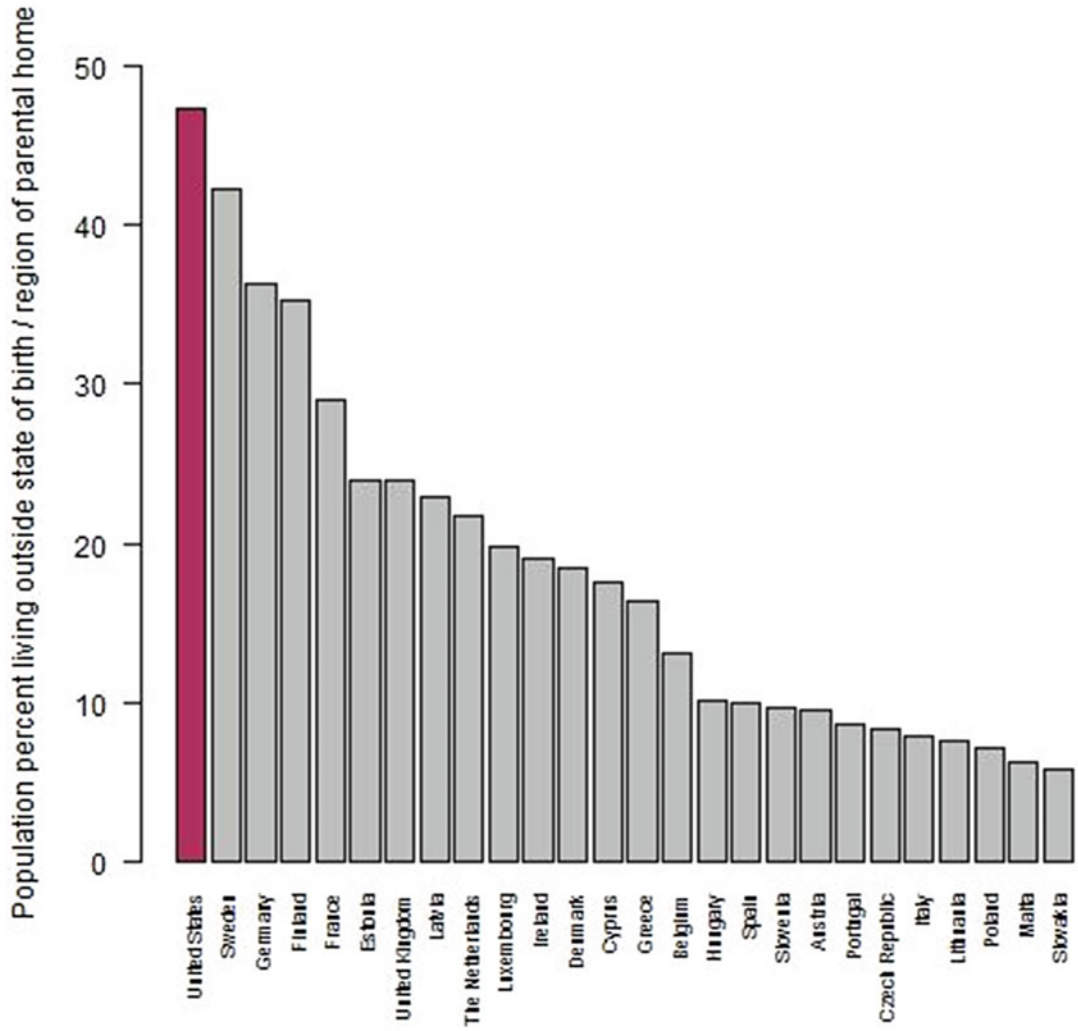

Fig. 19.4 Population percent 16+ living outside state of birth/region of parental home, by country, 2005. Data for the U.S. are from the 2005 American Community Survey 5 % IPUMS sample (Ruggles et al. 2010), and describe the percent of persons 16 years and over living outside their state of birth. European data are from the 2005 Eurobarometer survey (Papacostas 2005) and describe the percent of persons 16 years and over living outside the region of their parental home

Variations in the Propensity to Migrate

That North Americans are a highly mobile population is undeniable. However, migration is highly selective, and not every segment of the population is equally likely to make a move. Life cycle factors such as age, marital status, and childbearing have long been considered some of the main determinants of the propensity to migrate (Rossi 1980), but education, race/ethnicity, homeownership, and duration at current residence are also key determinants.

Age is the life cycle factor most strongly and consistently associated with the likelihood of moving. Rates of long-distance migration reach their peak in the young-adult ages, and decline sharply thereafter (see Fig. 19.5). Explanations for the high mobility of young adults tend to emphasize the multitude of economic and household shifts happening at these ages, including

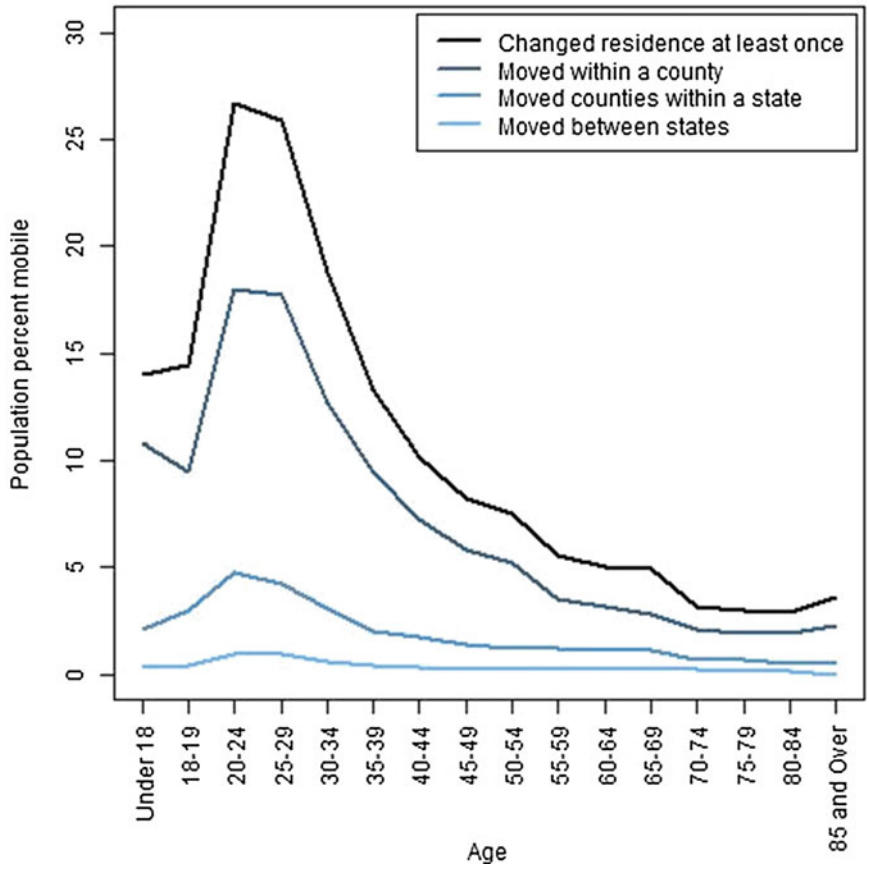

Fig. 19.5 One-year mobility rates by age in the United States, 2010. Data are from the 2010 Current Population Survey for persons aged 1 and over at the survey date, and describe the population percent changing residences in the previous 12 months

going away to college, seeking employment, and setting up new households. In addition, a human capital approach suggests that young adults are more likely to "invest" in migration, because they have a longer span of time over which to recoup the costs of migrating. Destination choices are also stratified by age. Large metropolitan areas (those with populations of one million or more) have recently experienced net in-migration only of young adults ages 25–29, and net-out migration of all other age groups (Plane et al. 2005; Johnson et al. 2005). Nonurban areas, on the other hand, have been net-exporters of young adults and net-importers of retirees, with in-migration rates peaking in the 60–64 year age group.

Education is less consistently linked to the propensity to migrate than age, but more consistently than other socioeconomic indicators like income and occupation. At a first glance of Fig. 19.6, a strong pattern between education and mobility is not apparent, based on the percent of each education category that moved in the past year. Those with professional or graduate degrees are slightly less mobile than the other categories (9 % made a residential move in the previous year), but the relationship between education and mobility seems weak. But, like age, educational differences in mobility are stratified by the distance of the move. Figure 19.6 shows that those in higher education categories are more likely than those in lower education

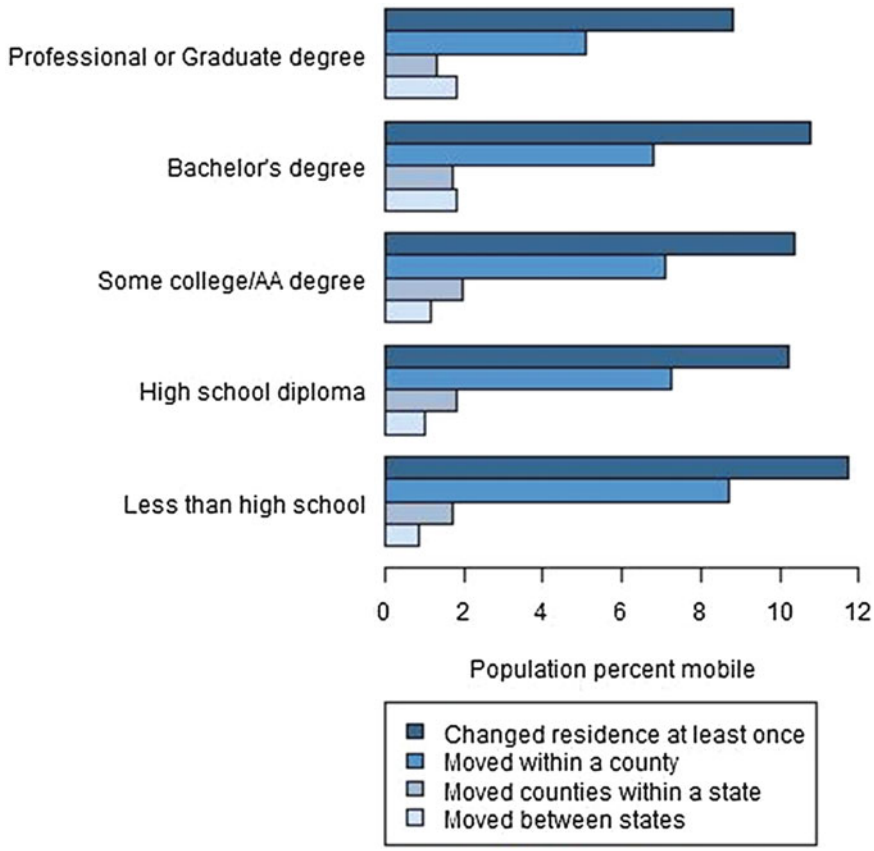

Fig. 19.6 One-year mobility rates by education in the **United States, 2010**. Data are from the 2010 Current Population Survey for persons aged 25 and over at the survey date, and describe the population percent changing residences in the previous 12 months

categories to make long-distance moves between states and are less likely to make localized moves within a county. In 2010, 9 % of the less than high school category made a localized residential move (within a county), the highest of any education category and much higher than the rate for those with a graduate or professional degree (5 %). In contrast, 1.8 % of those with a graduate or professional degree made a long distance move (between states), contrasting sharply with a rate of 0.8 % for those with less than a high school education. Indeed, Rosenbloom and Sundstrom (2004) found that much of the upward trend in long-distance migration over the past century can be explained by the role of rising educational attainment. Moves that fall in the middle, those between counties within the same state, do not seem to be linked to education at all. One explanation for the increased propensity of long-distance moves among higher education categories is that education is a human capital investment which opens up opportunities for employment in many geographical areas (Schultz 1961). In addition, going to college, itself, often entails migration, sometimes of long distances. In contrast, those in the lower education categories may not have the income to finance a long-distance move, and may be tied to local welfare programs, support networks, and informal economies (De Jong et al. 2005), whereas their increased rates of local mobility may be indicative of residential instability.

There are also important differentials in geographic mobility between racial groups. In 2010, blacks and those in the "other" racial category were the most likely groups to have moved in the

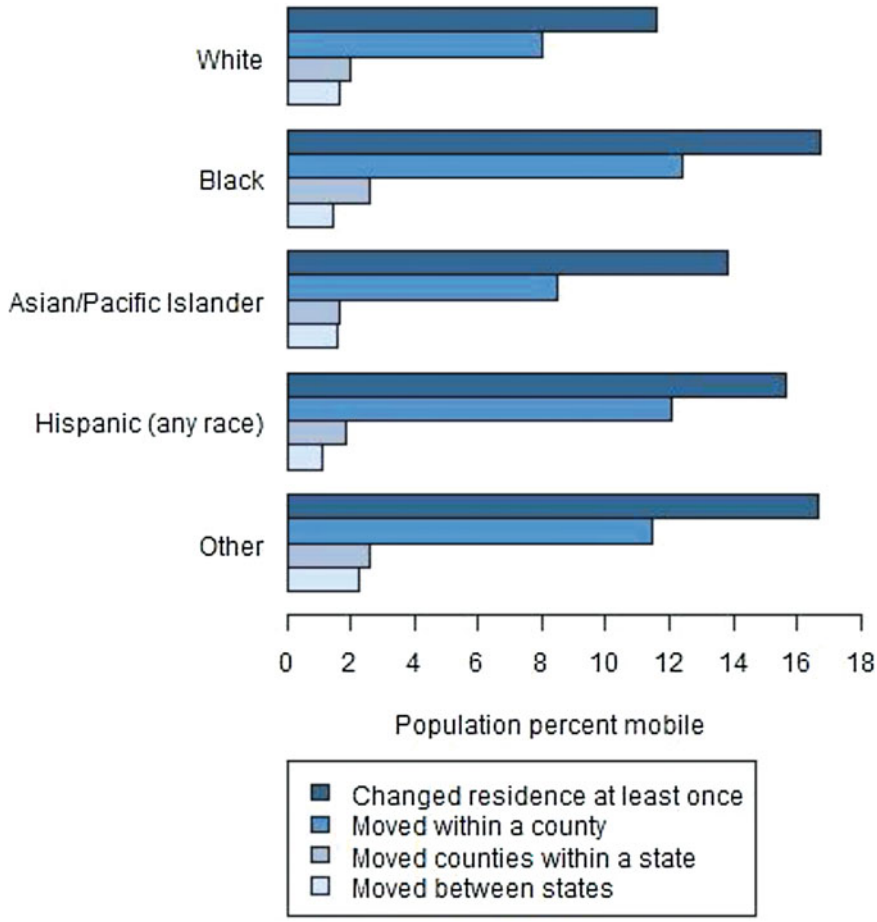

Fig. 19.7 One-year mobility rates by race in the United States, 2010. Data are from the 2010 Current Population Survey for persons aged 1 and over at the survey date, and describe the population percent changing residences in the previous 12 months

previous year (17 %), while whites were the least likely to have moved (12 % – see Fig. 19.7). But again, these differences are stratified by the distance of the move. Whites, and to a lesser extent Asians and Pacific-Islanders, are less likely to make a localized move within a county compared to blacks, Hispanics, and other non-white racial groups. At an even smaller scale, there are differences in the types of localized moves made by racial groups. Among individuals who move, whites were more likely than blacks to move from city to suburb, while blacks were more likely than whites to move from suburb to city, net of sociodemographic and economic differences between the racial groups (South and Crowder 1997). Racial differentials are small at greater migration distances (see Fig. 19.7). Racial differentials in local residential mobility (intra-county and intra-metro moves) cannot be explained totally by socioeconomic differences; rather, scholars have pointed to the role of discriminatory housing practices, involuntary mobility stemming from urban redevelopment programs, and other constraints to mobility choices.

The effects of age, education, and race on the propensity to migrate also respond to period and cohort effects, such as prevailing economic conditions or the number of workers entering the labor market at the same time. For example,

a study of migration from 1870 to 1950 found that rates of net migration tended to peak at ages 20–24 in prosperous decades, but at somewhat later ages during economically depressed decades, reflecting period effects (Eldridge 1964). Reflecting cohort effects, migration among high-education categories increased when returns to schooling were high in the 1950s and 1960s, when working-age cohorts were small and employees with a college degree were in high demand (Long 1988). In contrast, migration of highly-educated groups dropped off when returns to schooling were low in the 1970s and 1980s, when the large baby boom cohort reached adulthood and flooded the labor market.

Together, differences in who migrates and under what circumstances demonstrate how economic and non-economic factors interact to influence migration behavior. The attention that economic and non-economic factors have each received in the migration literature will be a recurring theme throughout our chapter, so it is useful to provide a brief definition of each. We use the term "economic" to refer to wages, employment, and other financial factors; whereas we use "non-economic" to refer to all non-pecuniary factors such as housing and neighborhood preferences, family dynamics, social networks, and racial dynamics. Indeed, many of the patterns described – such as high mobility in the 20–29 age range, high rates of long-distance migration among individuals with college degrees, and suppression of migration in large birth cohorts – certainly have an important economic component. Even when economic opportunities are the main motivation for mobility, non-economic factors often play a secondary role. For instance, a person in their 20s might be less likely than others their age to move for economic opportunities if they face housing discrimination due to their race. This simple example of the interplay between economic and non-economic drivers of migration leads us to question what we view as a dominance of economic explanations in the migration literature, a point to which we turn next.

The Dominance of Economic Explanations for Migration

Everett S. Lee's article, "A Theory of Migration," published in 1966 by *Demography*, the official journal of the Population Association of America, has achieved the status of a "classic" statement of migration theory. It is safe to say that any serious paper that draws from migration theory will include a citation to Lee's article. At last count, it has accumulated roughly 2000 citations. Professor Lee drew heavily from E.G. Ravenstein's "Laws of Migration" (1885, 1889) to construct and articulate the propositions of his theory which, he argued, are useful for understanding the volume of migration as well as the characteristics of migrants. In our view, neither Lee nor Ravenstein argued for the clear primacy of economic forces or explanations of migratory behavior. Let's take a closer look.

To simplify Lee's theoretical framework, he described migration as a function of the characteristics of places of origin and places of destination. Those characteristics could operate either to encourage or discourage movement from, and to, locations. Or, they could be neutral with respect to migration. These influences are now, more generally, referred to as "push" and "pull" forces. Whether the balance of positive and negative motivations for migration actually result in a change of locations depend, further, on a set of "intervening obstacles" that affect the cost or feasibility of moving from point ***a*** to point ***b***. As examples of push and pull forces, Lee mentioned the following: climate, school system, and taxes. To be sure, economic incentives must be included among the push and pull forces described by Lee, and monetary cost is an important component of the intervening obstacles. However, Lee's theory did not frame migration patterns as largely the result of a careful balancing of financial costs and benefits. Indeed, he argued that "The decision to migrate, therefore, is never completely rational, and for some persons the rational component is much less than the irrational" (1966: 51).

The message regarding the relative importance of economic motives for migration is a bit fuzzier in Ravenstein's "Laws of Migration." On the one hand, in his discussion of the motivations for migration, Ravenstein does write "Bad or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion (slave trade, transportation), all have produced and are still producing currents of migration, but ***none of these currents can compare in volume with that which arises from the desire inherent in most men to 'better' themselves in material respects***" (1889: 286, emphasis added). On the other hand, Lee described Ravenstein's claim for the superiority of economic motives as "somewhat tentative" (1966: 47). We would agree with Lee's interpretation of Ravenstein's conceptual framework for migration.

Lee's Theory of Migration mentions a wide variety of possible push and pull factors that individuals must consider in making migration decisions. He further recognized that the relative importance of specific push and pull factors varied across the individuals making those decisions. Lee writes "Clearly, the set of +'s and −'s at both origin and destination is differently defined for every migrant or prospective migrant" (1966: 50). Thus, in Lee's view, not only were migration decisions influenced by a diverse set of macro-level conditions, but the importance of those contextual factors could also vary according to a multitude of micro-level characteristics – in the language of multilevel modeling, a cross-level interaction.

Other scholars have stressed the great diversity of factors that are responsible for individual decisions to migrate and for the scale and profile of migration streams between two locations. For instance, Larry Long, in his state-of-the-art statement of migration and residential mobility in the U.S. as of 1980, wrote, "...attempts to model or explain large migration flows face the challenge of incorporating a great variety of explanatory frameworks and variables." He goes on to note that the "secondary reasons [for migration] are even more varied and heterogeneous than primary reasons for moving, further supporting the notion that migration decisions are complex and influenced by many considerations" (1988: 233–34).

The reasons that migrants give for deciding to move reinforce the conclusion that the motivations, and therefore the explanations, for migration are diverse and complex. The American Housing Survey (formerly the Annual Housing Survey) has collected information about reasons for moving since 1973. These data can be used to summarize the reasons for moving reported by all those who vacated a residence during the previous 12 months, regardless of the distance of their move. This information is reported in Fig. 19.8a for the 1985 AHS and Fig. 19.8b for the most recent AHS (2011). Given the large percentage of respondents reporting "other reasons," one must be careful about drawing firm conclusions from this evidence. Still, two general points seem clear. First, individuals and households move for a great diversity of reasons, as suggested by Lee, Long, Ravenstein, and others. Second, the specific reasons reported by the migrants themselves are split between those that are primarily economic in nature and those that do not reflect economic motivations. In this sample of diverse movers, less than 30 % mentioned job-related or other financial reasons for changing residences prior to the 1985 or the 2011 AHS.

We are cautious to not over-interpret the contents of Fig. 19.8. The inclusion of all types of moves, regardless of distance, demands such caution. Other things being equal, one would expect economic motivations to be less dominant for shorter moves. However, we do believe that the evidence drawn from the reported reasons for moving, by the movers themselves, is adequate to at least raise doubt about the dominance of economic motivations for movers and migrants in recent U.S. history.

Despite the wide recognition by migration scholars that people move for a great variety of reasons, and despite the diversity of reasons for moving reported by migrants themselves, it is our impression that economic explanations have indeed dominated the literature on internal migration in North America. Of the more

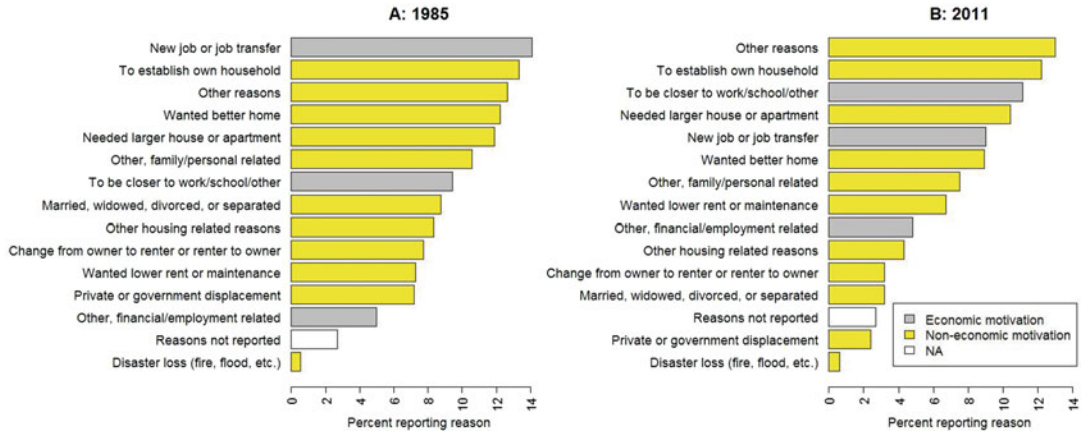

Fig. 19.8 Reasons for leaving previous residence for respondents who moved during the previous year, United States, 1985 and 2011. Data are from the 1985 and 2011 American Housing Survey (U.S. Census Bureau 1985, 2011). Totals do not add up to 100 % because respondents may select multiple reasons for leaving their previous residence

contemporary statements on internal migration (Rosenbloom and Sundstrom 2004; Ferrie 2006; Frey 2009), none are as comprehensive as Long (1988), and most are dominated by economic explanations. This is true at the macro level as reflected in the amount of attention devoted to equilibrium models that emphasize geographic disparities in wages and other economic conditions (Treyz et al. 1993; Mueser and Graves 1995; Partridge et al. 2012). It is also true of efforts at the micro level to specify individual-level and household-level decision making models that stress most heavily economic characteristics such as employment and income (Schultz 1961; Sjaastad 1962; Kennan and Walker 2011; see also Greenwood's overview of equilibrium models and microdata approaches in Chap. 3). Within this literature, even non-wage locational amenities are assumed to be weighed in economic terms (Treyz et al. 1993; Mueser and Graves 1995; Partridge et al. 2012; Morrison and Clark 2011). Now, one might point to the evidence in Fig. 19.8 to justify the disproportionate weight that has been given to economic explanations for migration – after all, they do account for roughly one-third of all recent moves, and presumably an even greater share of long-distance moves. However, it remains that the two-thirds represented by non-economic motives have not received their proportionate share of attention in the literature on internal migration in North America. Why?

Of the many possible reasons for the dominance of economic explanations in the migration literature, we will mention briefly only three. First, in general, economic factors lend themselves more easily to quantitative measurement and there is greater consensus about how individuals and households should respond to financial motivations. A plethora of datasets from the decadal census to longitudinal surveys like the National Longitudinal Survey of Youth and Panel Study of Income Dynamics provide considerable detail about the employment status, occupations, and earnings of individuals. And, most scholars would agree that people in the labor force would rather be employed than unemployed; and working people would rather earn more for their labor than less. It is logical to deduce, then, that aggregate migration streams between locations would reflect differentials in economic conditions among those locations, and that individuals would use geographic mobility as one mechanism for pursuing greater economic opportunity. The data are readily available to test that deduction.

Second, a growing interest in immigration in the 1980s and 1990s may have diverted attention from research on internal migration in North America (an observation also noted by Wright

and Ellis in Chap. 2 and Ellis 2012), causing theoretical development of non-economic explanations to stall. Recent declines in geographic mobility have somewhat renewed research interest on the topic of internal migration, but the Great Recession has also recharged the focus on economic explanations (Frey 2009; Partridge et al. 2012) even though the rapid declines in mobility during the recession years were part of a more general slow-down operating since the 1980s (Molloy et al. 2011).

Third, as described below, the major migratory events in U.S. history seem to have conformed quite well to a model of migration that stresses geographic relocation in response to macro-level imbalances in economic conditions and opportunity or to micro-level decisions by individuals to "better themselves in material respects," as claimed by Ravenstein. However, as we will argue below, it is also possible to point to major migration and residential mobility phenomena that are more difficult to reconcile with a primarily economic conceptual framework.

Migration Patterns Through History

Settlement and Occupation

As a species, *Homo sapiens sapiens* is not indigenous to North America. Not very long ago, in geologic time, the continent was devoid of humans. Therefore, the entire history of the species in North America has also been a history of internal migration. The first major wave of migration swept primarily from the West to the East. The second major wave followed the reverse path. Although much new information has emerged recently about the first wave of migration (Mann 2005), it remains primarily the subject of research by anthropologists and archaeologists, rather than demographers. It is much easier to study migration when the phenomenon, itself, is chronicled by the participants or by their contemporaries. That is definitely more true of the second, East-to-West, wave of internal migration than it is of the first.

One measure of the westward expansion of relocated Europeans in North America is the gradual shifting of the geographical center of the population from East to West. Originally hugging the Atlantic coastline, the location of that imaginary milepost now lies in Texas County, Missouri at 37.517534° North Latitude and 92.172096° West Longitude.[3] To be sure, before the middle of the continent was permanently occupied by Europeans, selected outposts, especially along the West Coast and major interior rivers such as the Mississippi and Missouri, had been established. However, the population sizes of those settlements were far too small to have much influence on the shifting location of the population's geographic midpoint. It was not until President Thomas Jefferson commissioned the exploratory expedition by Meriwether Lewis and William Clark between 1804 and 1806 that the new American nation fully appreciated the vast and diverse territory that lay between the two coastlines. By 1893 Frederick Jackson Turner was able to announce the closing of the American frontier, less than a century after the Lewis and Clark expedition. But, of course, great waves of westward migrants would continue well after 1890, and that symbolic milepost marking the middle of the Nation's population would march inexorably toward the West.

Immigration, war, racism, and the search for economic opportunity all shaped the second great wave of internal migration. The constant, virtually unregulated, flow of immigrants, first from northern and western Europe and later from southern, central and eastern Europe, swelled the growing cities in the eastern United States. The vast areas to the West of the Eastern Seaboard served as a kind of safety valve for this expanding population, particularly for those seeking a more bucolic environment in which to settle. Increasingly, both the native-born and foreign-born populations set out in search of the economic opportunity that was promised by the

[3] In 1790, the date of the first census in the United States, the population center was estimated to be located in Kent County, Maryland at 39.27500° North Latitude and 76.18667° West Longitude.

land-abundant, resource-rich, and seemingly vacant areas to the West. In fact, however, those areas were not unoccupied. In order to "win the West" the European settlers went to war with the resident Native American societies, resulting in the extreme ethnic cleansing and the near genocide of the American Indian population. The more "fortunate" groups of Native Americans were relocated to reservations, sometimes far from their home territories, and with devastating long-term consequences for their health and economic vitality. With its original inhabitants killed or relocated and confined, the European newcomers were free to establish new farms and, eventually towns and cities, in the West.

The westward expansion of the European-origin population in the United States, as with most large scale episodes of internal migration, was motivated by a diverse set of forces. Some viewed it as a realization of the general principle of "Manifest Destiny" which considered the expansion of European population and civilization on the North American continent to be inevitable. More specifically, and less philosophically, it was primarily motivated by the pursuit of economic opportunity and advancement in lands that were resource rich and less densely populated, or in Ravenstein's terms, an effort by migrants to "better themselves in material respects."

Net-migration of the European North American population to the West would continue long after the second great wave of internal migration had subsided. Eventually, California would grow to become the most populous state in the Nation by 1970, and a new concentration of population that follows the Pacific coastline would mirror its counterpart along the Atlantic. Subsequent episodes of internal migration, by comparison, would not attain the same magnitude as the European occupation of the continent, nor the global significance of the original settlement from Asia. Still, they were important demographic phenomena in their own right.

The Industrial Revolution and Urbanization

As the North American population spread across the continent, rural areas were initially the centers of economic activity. This would change with the development of industrial technologies. The early industrial revolution began in England around 1760 and spread to North America within decades. The Industrial Revolution was marked by transitions from hand production methods to machines, new chemical manufacturing and iron production processes, transitions from wood and other bio-fuels to coal, and improved efficiency of steam and water power. These new technologies gave rise to the first industrial cities. However, these cities were not necessarily technologically modern, and rapid population growth in new industrial cities brought problems of disease and overcrowding (Hautaniemi et al. 1999).

The second industrial revolution came to the United States soon after the Civil War and continued roughly until World War I. Major developments during this period included the shift from steam to electrical power, the rise of the steel industry, and development of mass production and the production line. Cities became the new centers of production, and offered economic opportunities and livelihoods that were no longer tied to the land. The pull towards cities was often accompanied by a push from rural areas, where opportunities in agriculture were on the decline as a result of advances in mechanized farming in some areas and the declining fertility of soils in others.

Within the span of the 40 years from 1880 to 1920, the fraction of the U.S. population that was urban increased from a little more than one quarter to more than half (Carter et al. 2006). Since 1920, the U.S. Department of Agriculture (USDA) has tracked migration from farms to nonfarm locations, which were summarized by Ferrie (2006). The USDA data show a gradual increase in net outmigration from farms since

1920, but with a great deal of year-to-year fluctuation that, according to Ferrie (2006), reflect economic conditions in agriculture. Accompanying the rural-to-urban migration of the native born was a mass flood of immigrants coming to cities. From 1880 to 1920, the number of foreign born in the U.S. population doubled, from 7 to 14 million, further bolstering urban populations and contributing to the economic development of cities (Hirschman and Mogford 2009). By 1950, New York, Chicago, and Philadelphia each had as many residents as they have now, and New York was the largest urban agglomeration in the world (Yaukey and Anderton 2001).

Canada followed a similar trajectory, becoming a predominantly urban nation at an early stage as a result of massive migration streams. As Canadian cities made the shift from export centers to places of production, millions of migrants flowed in to take advantage of growing economic opportunities. Between 1871 and 1921, Montreal grew from a successful trading center of 174,000 to a growing industrial metropolis of almost three-quarters of a million, while Toronto's population expanded from just over 65,000 to more than 800,000 between 1861 and 1931. In 1851, just 13 % of Canada's 2.4 million residents lived in urban areas. By 1921, this percentage had increased to 49 % of a national population of almost nine million (Coffey 1994; Nader 1975).

Thus migration – both internal and international – quickly transformed North American populations from rural- to urban-focused and was an integral part of the economic emergence of the continent. Economic motivations were paramount during this period of rural-to-urban migration, but it was innovations in industry and technology that set the process in motion.

The Great Migration

Between 1910 and 1970 millions of southerners in the United States abandoned their region of birth. This massive geographic relocation of population, which is commonly referred to as "The Great Migration," included both blacks and whites and consisted of both temporary and permanent migration. And, like the second great wave of internal migration from East-to-West, it also was shaped by immigration, war, racism, and the search for economic opportunity. For our brief discussion of the Great Migration, we distinguish between two separate phases – roughly between 1910 and 1940 and then from 1940 through 1970 (Gregory 2005; Tolnay 2003).

By 1910, decades of an agricultural economy that relied heavily on sharecroppers or unskilled agricultural laborers combined with retarded industrial development to produce a large population of surplus workers and disgruntled southerners. The forces that might "push" the population out of the South were powerful, but the "pull" forces attracting them elsewhere were weak (Mandle 1978). That situation changed dramatically with the expanding war in Europe during the second decade of the twentieth century (Collins 1997). The hostilities in Europe severely disrupted the flow of immigrants from eastern and southern Europe, depriving northern industry of the supply of inexpensive workers on which they (and their profits) had grown dependent. In addition, the war increased demand for the production of armaments and materiel, especially after the United States entered the War on April 6, 1917. Massive numbers of southerners responded to the fortuitous alignment of push and pull forces. By 1940 3.2 million southern-born whites and 1.5 million southern-born blacks resided in the non-South (Gregory 2005). Most went to major population centers in the Northeast and Midwest, following closely the primary transportation routes (railroad lines and highways) that connected the regions. A much smaller group of migrants headed to the West.

War figured prominently in the second phase of the Great Migration as well. After a partial hiatus during the years of the Great Depression, the southern exodus intensified as the Nation's industrial and manufacturing sectors once again geared up for war, this time with the Axis Powers in Europe and Asia. New munitions plants on the West Coast, especially in California, drew a larger share of the migrants than had moved

West during the first phase of the Great Migration. Still, significant migration streams continued to funnel southerners to major northern metropolises like Chicago, Detroit, New York, and Philadelphia. This time, immigration contributed to internal migration largely through its virtual absence. After World War I, the United States adopted restrictive immigration quota laws that severely reduced the number of new arrivals, especially from southern, central, and eastern Europe which had supplied a large segment of the industrial workforce before World War I. Between 1914 and 1919 the number of new immigrants obtaining legal permanent resident status plummeted from over 1.2 million to fewer than 200,000. After climbing back to 800,000 by 1920, the number of immigrants fell again to only 250,000 by 1925 (Migration Policy Institute 2012). As a result of this diminished flow of foreign-born workers, the production effort for World War II had to be met primarily with domestic labor. These pull forces, combined with continued agricultural and industrial stagnation in the South, fueled and accelerated the exodus from the South between 1940 and 1970. The number of southern-born blacks and whites living in the North and West had grown to 7 million and 3.3 million, respectively, by 1970 (Gregory 2005).

To this point, we have focused on *race-neutral* forces that operated during the Great Migration. Southern blacks and whites, alike, were strongly affected by the forces of war, immigration, and the search for economic opportunity. In addition, however, southern blacks were motivated to migrate because of a powerful set of *race-specific* forces. The racial state that prevailed in the South through at least the first half of the twentieth century had a strangling effect on the African American population by restricting their educational and economic opportunities, stealing their political voice, assigning them to the status of second class citizens, and exposing them to extraordinary levels of lethal extralegal violence (Blackmon 2008; Mandle 1992; Ransom and Sutch 2000; Tolnay and Beck 1995). Therefore, to the list of influences that operated during the Great Migration – immigration, war, and the search for economic opportunity – for African Americans we can add the flight from racial oppression. These additional race-specific forces operating on African Americans are reflected in racial differences in the rate at which the southern-born population left the South during the Great Migration. During the first phase of the Great Migration, the absolute numbers of black and white migrants leaving the South were roughly equal (see Fig. 19.9) but the magnitude of the rate at which African Americans abandoned the region was substantially higher.[4] During the second phase of the Great Migration, both the absolute number and the rate at which blacks left the South exceeded the corresponding figures for whites, in every decade (see Fig. 19.9).

For white migrants leaving the South, the strongest motivations were economic. The changes in southern agriculture, and the slow pace of southern industrial development, had failed them as sources of gainful employment. In the absence of such powerful economic incentives, it is unlikely that the exodus of southern whites would have been nearly as substantial as the trends revealed in Fig. 19.9. The story for southern blacks is quite different. To be sure, the promise of greater economic opportunity in the North and West was an important pull factor. However, in light of the racial caste line and

[4] We have included two trend lines for Whites in Fig. 19.9 – one including the state of Florida and one that excludes the state. Florida experienced patterns of net-migration during these decades that deviated from those that were typical of other southern states. Especially during the second stage of the Great Migration, 1940 through 1970, many white migrants, from the South and elsewhere, headed to Florida. Including Florida in our estimates of net migration and net migration rates understates the extent to which whites were leaving other southern states during these decades. The information for 1910 through 1940 has been drawn from Lee et al. (1957), Tables 1.11 and 1.13 for native whites and Tables 1.14 and 1.16 for non-whites. The information for 1950 through 1970 was obtained from ICPSR dataset number 8493 which includes estimates of net migration, net migration rates, and population, by race for 1950 through 1970. The latter estimates for whites refer to all whites, not just native whites.

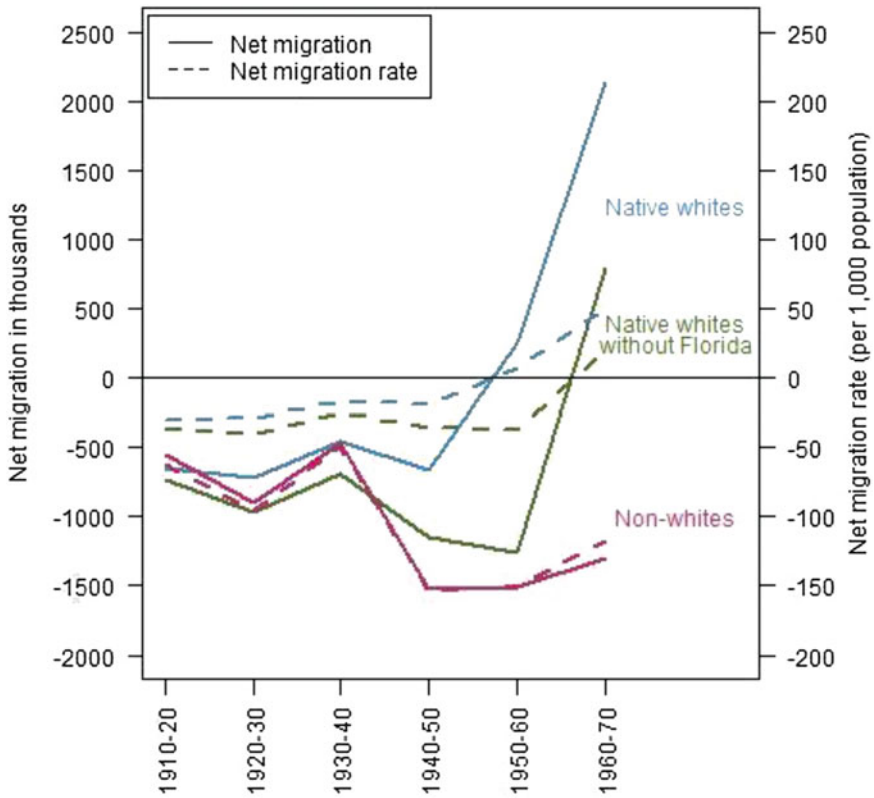

Fig. 19.9 Net migration and net migration rate for southern States by race and decade. Data for 1910–1940 are from the Lee et al. (1957). The information for native whites is contained in Table 1.11 (for net migration estimates) and Table 1.13 (for total population). For blacks, the information was contained in Tables 1.14 (for net migration estimates) and Table 1.16 (for total population). Data for 1950–1970 were obtained from Bowles et al. (1975)

severe racial discrimination in all southern institutions, it is likely that the level of migration was greater than it would have been in the absence of such forces.

Regional Decentralization and Counterurbanization

In the United States, the Great Migration was followed by another period of regional migration shifts, this time from the industrial North to emerging cities in the South and Southwestern regions of the country referred to as the *Sun Belt*. After decades of population growth fueled by industrialization, northern cities like Philadelphia, Detroit, and Buffalo began hemorrhaging population in the 1970s. At the same time, the South and West experienced unprecedented levels of in-migration. Accompanying the shift from North to South was a higher rate of growth of the nonmetropolitan population than for the metropolitan population, or "counterurbanization", and higher rates of growth in small metropolitan areas than in large metropolitan areas (which saw low growth or declines).

Net outmigration from the Northeast and Midwest in the 1970s was somewhat an acceleration of previous patterns (Long 1988; Ferrie 2006). The Midwest has had net outmigration almost continuously since the Great Depression. The Northeast maintained positive net migration through the 1960s, but this was due entirely to migration of blacks from the South. The Northeast had seen outmigration of whites steadily

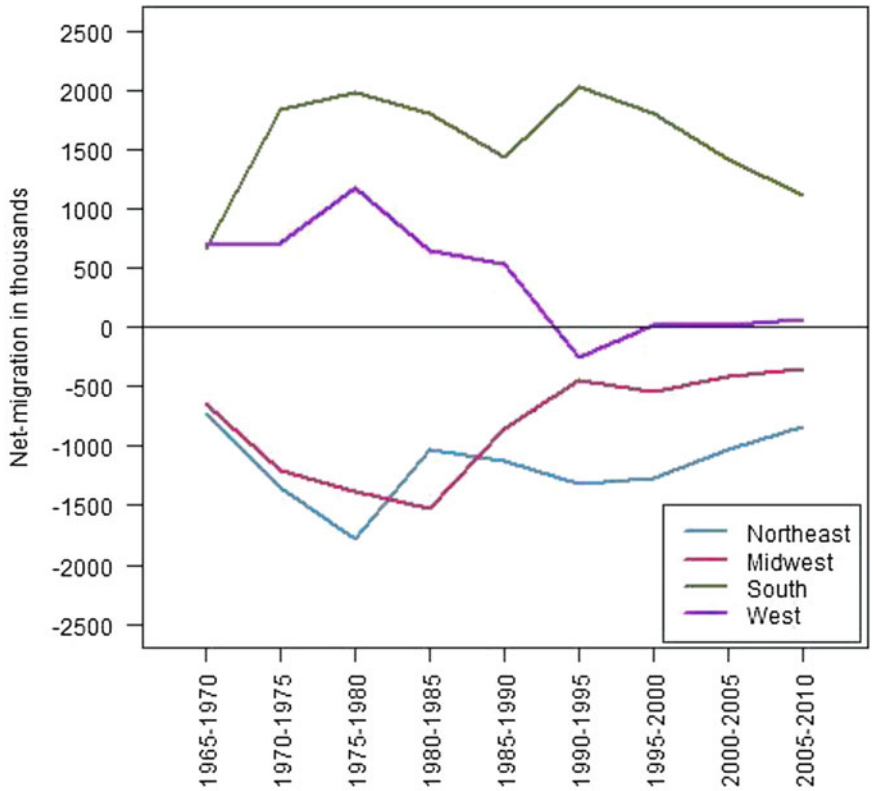

Fig. 19.10 Net migration by region in the United States, 1965–2010. Data are from the Census of Population, 1970, 1980, 1990, and 2000; and the Current Population Survey, 1975, 1985, 1995, 2000, and 2010, provided by the U.S. Census Bureau and printed in Ihrke and Faber (2012), Table 3

since World War II. Despite previous declines, the pace of net outmigration in the 1970s was unprecedented (see Fig. 19.10). In the decade from 1970 to 1980, the Northeast and Midwest each had a net loss of around three million people. In contrast, the South had a net gain of close to four million people in the 1970s, and an additional three million in the 1980s. The West gained almost two million people in the 1970s and just over one million in the 1980s. In the South especially, the population gains in the 1970s and 1980s far exceeded those in any previous decade.

Regional decentralization has not been as dramatic in Canada. Ontario has historically drawn the greatest share of in-migrants of any province (Ledent 1990). The booming exploitation of Alberta's natural resources led to rapid increases in in-migration in the 1970s. Alberta's in-migration share went from 15 % in 1970 to a peak of 28.5 % in 1981, before dropping back down rather quickly once the economic boom was over (Ledent 1990). Economic opportunities in the West may have temporarily diverted migrants away from Ontario, which saw a dip in in-migration over the same time period (Ledent 1990). Population growth in the western provinces has continued at a somewhat more rapid rate than the rest of the country, but much of this growth has been driven by immigration rather than internal migration (Chagnon and Milan 2011).

Frey (1987) offered two perspectives to explain regional population shifts and counterurbanization. The *regional restructuring perspective* explains the shifts with a fundamental reorganization of production, and a transfer of jobs, corporations, capital, and hence,

population, from the North to the Sun Belt. The more complex story is centered around each region's existing industry structure, and changing demand for goods and services at the national level. With the exception of New York and Boston, cities in the Northeast had heavy concentrations in manufacturing with few financial-commercial functions. In fact, South and Poston (1982) argue that New York and Boston exerted such a regional dominance that they may have hindered the development of financial and commercial functions in other areas of the region. Midwestern cities were also mainly characterized by manufacturing specialization. In contrast, cities in the South and West were mainly characterized by service-oriented industries, with wide variation in financial and commercial activity. Differentials in regional specializations stemmed from initial advantages with respect to natural resources and transportation in the North and Midwest, allowing these regions to develop as centers of manufacturing and trade. According to South and Poston (1982), the specialization of southern cities in service activities reflects their historical economic dependence on the North. This set up southern and western cities for a dramatic rise when national shifts in demand occurred in the second half of the twentieth century. The economy shifted to a service society, with the leading industries of growth being defense, technology, and energy. The manufacturing infrastructure of northern and midwestern cities was irrelevant to these new and gaining industries, while the Sun Belt cities offered several advantages. In addition to the existing service economy, cities in the Sun Belt offered relatively cheap energy resources, a low-wage and unorganized labor force, a pleasant climate, and an abundant supply of affordable housing (South and Poston 1982).

The Sun Belt's locational features tie in with the second perspective offered by Frey (1987) to explain regional decentralization and counterurbanization. The *deconcentration perspective* places less emphasis on the new organization of production and attributes a greater role to individuals' locational preferences. According to Wardwell (1980), developments in transportation and communication technologies and the rise of personal affluence created greater locational flexibility for both firms and households in the 1970s, allowing individuals and households to act on their preferences for desirable features such as good climate, more space, clean air, and fewer crimes, many of which were more readily available in smaller cities and nonmetropolitan areas in the Sun Belt (Zuiches 1981). As a result, the distribution of firms was shaped much more by the residential location preferences of workers than it had been in the past (Wardwell 1980). Indeed, Frey's (1987) comparison of redistribution patterns pre- and post-1970 provides more general support for the deconcentration perspective over the regional restructuring perspective.

The correspondence between regional economic and regional population booms and busts demonstrates complex interactions between economic and non-economic forces that have shaped regional migration patterns in North America. Without the national shifts in economic demand that kick-started regional decentralization, the Sun Belt would likely never have risen to such prominence. However, non-economic forces like climate considerations, social conditions, and lifestyle concerns have further accelerated North-to-South migration in the United States, as well as migration from large metro areas to smaller metros and nonmetro areas in the United States and Canada (Florida 2002; Morrison and Clark 2011; Brown and Scott 2012). Moreover, many of the economic opportunities that have attracted migrants to growing regions have their roots in non-economic antecedents. Especially noteworthy here are patterns of federal spending, shaped by non-economic political processes, that have funneled billions of tax dollars into the defense industry, industrial agriculture, and other economic activities concentrated in growing regions (Beauregard 2001; Heppen 2009; Schulman 1991).

Suburbanization, Exurbanization, and the Return to the City

Up to this point, we have focused on historical migration shifts that involved streams of migrants moving among entire North American

regions or major land categories (as in rural-to-urban). In the mid-twentieth century another unprecedented migration shift occurred, but this time it occurred *within* metropolitan areas. The process of suburbanization involved shorter distance moves than previous migration streams, but the impact on the landscape of urban development was at least as extreme.

For centuries, the outward expansion of cities was limited by available technology, especially transportation and communication. Urban dwellers lived in "walking cities", and those on the urban fringe tended to be poor (Hawley 1971). From 1815 to 1875, the transportation revolution would turn many cities "inside out", and by 1850, planned suburbs were being developed along railroad and trolley lines. This period of time was characterized by enormous growth in metropolitan size, rapid population growth on the periphery, a leveling of the density curve, an absolute loss of population at the center, an increase in the average journey to work, and a rise in the socioeconomic status of suburban residents (Jackson 1985; Hawley 1971; Schnore 1957). Suburbanization occurred more rapidly in North America than in Europe, which cannot be explained entirely by transportation and technology. Some scholars point to the role of cultural values, especially the idealization of the free-standing home and the expansive yard in the American consciousness (Jackson 1985). Housing became cheaper and more accessible to a growing proportion of the American population in the twentieth century with the invention of the automobile and new more cost-effective methods of home construction. In addition, two innovations of the New Deal – the Home Owners Loan Corporation and the Federal Housing Administration – made home loans more available than ever by insuring potential losses for private lenders. These programs also further entrenched socioeconomic and racial segregation by establishing the practice of red-lining, in which lines were drawn around low-income and minority neighborhoods to delineate areas where banks would not provide mortgage loans.

The largest boom in suburbanization did not occur until after World War II. This was an era of rapid suburbanization spurred by increased automobile ownership, the development of high-speed, limited-access highways, improved communication technologies, and low-interest home loans offered by the federal government to veterans (Schnore 1957; Guest and Brown 2005). The post-war period was also a time of growing affluence that created demand for larger homes and lower density living, and low-cost suburban housing developments in the style of Levittown spread across the country (Jackson 1985; Harris 2010).[5] In the United States, the Interstate Highway Act of 1956 redirected more money towards roads, further contributing to the downward spiral of public transportation and encouraging suburbanization. Between 1950 and 1960, suburbs grew at an astonishing rate – 48.4 % – while central cities grew at a rate of only 7 % (Taeuber 1972). In 1950, about one-quarter of the American population lived in what were considered suburbs and by 2000, at least half of the population lived in suburbs (Hobbs and Stoops 2002).

The effect of suburbanization on central cities, at least in the United States, has been severe. Employment declined downtown, the demand for centrally located housing fell, and city governments had to deal with an eroding tax base due to population loss (Sugrue 1996). Furthermore, the suburbanization of white and more affluent residents increased concentrations of poor and minority populations in central cities (Jargowsky 2002). Declining conditions and opportunities in central cities encouraged further

[5] The housing development company Levitt and Sons built the first "Levittown" on an expanse of land 25 miles east of Manhattan. Levitt and Sons were pioneers in building homes using mass production techniques, and the first Levittown was the largest housing development ever put up by a single builder. The second major project was located near Philadelphia, in lower Bucks County, Pennsylvania. The third Levittown was built in the 1960s in Willingboro, New Jersey, within distant commuting range of Philadelphia. Levitt and Son's housing developments were widely publicized, and soon builders in every large metropolitan area were adopting similar mass production techniques (Jackson 1985; Harris 2010).

outmigration, thus, the decline of central cities seemed to be self-reinforcing.

A resurgence of growth in large metropolitan areas in the 1980s curtailed the trend of counterurbanization and provided signs that the U.S. was entering a post-suburban age. According to the Current Population Survey sample data, central cities reduced their net outmigration from 2.2 million in 1980–1981, to 1.7 million from 1983 to 1984 (Long 1988). Northern metropolitan areas with strong knowledge-based and financial service industries reversed their 1970s decline to a 1980s decade-wide gain (Frey and Speare 1992). Gentrification of central cities became an important new trend, credited with revitalizing city centers but also displacing lower-income and minority populations (Nelson 1988; Slater et al. 2004; Lee et al. 2008). However, the return-to-the-city phenomenon was uneven among urban neighborhoods. The 1980 Decennial Census revealed that although gains in average incomes occurred in some central-city tracts, many more experienced increases in poverty and racial concentration (Lipton 1984).

Although the pattern of counterurbanization that began in the 1970s appeared to decrease in the 1980s, it re-emerged in the 1990s and 2000s when large metropolitan areas began to again lose population to smaller cities and nonurban areas (Plane et al. 2005; Johnson et al. 2005). Not all rural areas have benefited equally from counterurbanization, as population loss has continued in much of the Great Plains and rural Midwest almost steadily since the Great Depression. Rural areas that have benefited from net in-migration tend to be those closer to urban areas or those that offer recreation, amenity, or retirement opportunities (Johnson et al. 2005; Johnson 2006). Metro core counties have continuously been able to attract those in their early 20s, but have lost migrants from most other age groups, especially post-1970 (Johnson et al. 2005). Increasingly, migrants leaving the city have bypassed suburban areas closer to the inner city and settled in rural areas farther out, often in what have been come to be known as "exurbs" – primarily residential communities being created from scratch by developers that are often physically detached from the surrounding developed area (Guest and Brown 2005). Further contributing to the trend of counterurbanization, suburbs are taking on new and diversified roles (Ehrenhalt 2012). Whereas early post-war suburban residents were still often tied to central city workplaces, more recently, there has been creation of major employment centers in suburban areas (Guest and Brown 2005). As a result, many metropolitan residents now live and work in the suburbs and have little contact with central cities.

The trend toward suburbanization and exurbanization has raised concerns about urban sprawl – a haphazard type of development characterized by low-densities, separated land-uses, and dependence on automobiles. Anti-sprawl advocates stress the ways that sprawl depletes natural resources, consumes unsustainable amounts of energy, contributes to traffic congestion and air pollution, and undermines community life. Several policy initiatives have been implemented to combat sprawl, including Maryland's "smart growth" initiatives, Portland's urban growth boundary, and tax-based revenue sharing in the Twin Cities and Chicago metropolitan areas (Squires 2002). Even so, the United States has seen substantial declines in metropolitan density over the decades. From 1950 to 2010, the number of people per square mile of land area in metropolitan areas declined from 407 to 283 (Hobbs and Stoops 2002; U.S. Census Bureau 2012b). At the same time, the amount of time Americans spend commuting has increased at a rapid rate. Mean travel time for workers age 16 and over increased from 22 min in 1980 to 25 min in 2000, where it remained in 2009 (McKenzie and Rapino 2011). Of those who lived and worked in the same metropolitan area, commuting times were on average shortest for those who lived and worked inside the same principal city (21.1 min), and longest for those who lived in the suburbs and worked in the principal city (30.4 min) (McKenzie and Rapino 2011).

Many metropolitan areas in Canada also experienced a suburban boom beginning after World

War II. Driven in part by heavy investment in highway construction, lower-density municipalities on the outskirts of Canadian metropolitan areas grew dramatically as a function of migration from center-cities (Harris 2004). However, metropolitan decentralization has been less dramatic in Canada than in the United States. A key difference is that, in comparison to the political fragmentation that has persisted in U.S. metropolitan areas, Canadian central cities were much more likely from an early stage to simply annex growing suburbs. In addition, Canadian metropolitan areas have tended to adopt land-use policies that are less conducive to low-density sprawl and more friendly to higher-density, mixed-use development. Even so, as in the United States, migration into suburban zones of Canadian metropolitan areas remains brisk. Between 2006 and 2011, suburbs accounted for 83 % of the overall population growth in the metropolitan areas of Vancouver, Montreal, and Toronto (Cox 2012). Furthermore, for every person who moved from a suburb of Toronto to Toronto between 2001 and 2006, 3.5 made the opposite move (Turcotte and Vezina 2010).[6]

Recent years have seen another wave of revitalization in many central cities (Ehrenhalt 2012), yet suburban areas have retained their place as dominant destinations for movers to, and within, North American metropolitan areas in recent decades. Even in the face of significant annexation, population growth in the suburban areas continues to outstrip growth in the population of Canadian metropolitan areas as a whole (Statistics Canada 2012), and in the United States, suburban areas continue to gain substantially more domestic in-migrants than do their central cities, as well as an increasing number of international in-migrants (U.S. Census Bureau 2012c). Consequently, the population of suburbs has become increasingly diverse in terms of race, ethnicity, income, and family structure (Frey 2001; Frey and Berube 2002; Hall and Lee 2010).

The trends of suburbanization and exurbanization are fairly inconsistent with an explanation for geographic mobility that emphasizes economic motivations. Economic opportunities are now widespread throughout the suburbs, but in the initial stages of suburbanization most residents were still tied to central-city workplaces. Many of the initial suburbanites were motivated by preferences for larger homes and yards, and by wanting to escape various ills of the city like crowding, pollution, poverty, and crime. Discriminatory practices worked to determine which racial groups could obtain homes in which neighborhoods and suburbs, and may have contributed to lower rates of city-to-suburban moves among blacks compared to whites (South and Crowder 1997). More recently, exurbanization has been driven by preferences for recreation, amenity, and retirement opportunities, and migrants to these outlying areas are willing to accept the financial and temporal costs of commuting in order to be closer to these non-economic opportunities. Although city-to-suburban moves have picked up among minorities, who face fewer barriers than in the past, suburbs, themselves, still remain differentiated along racial lines (Hall and Lee 2010). Thus, residential preferences, racial dynamics, and other non-economic forces seem to have weighed heavily in the process of suburbanization.

Short-Distance Mobility

A distinguishing feature of North American migration is the high level of short-distance mobility. For decades, annual mobility rates for Americans hovered between 15 and 20 %, with well over half of the moves in a typical year occurring between housing units in the same county (see Fig. 19.11). In the 5-year period between 2000 and 2005, more than 20 % of Americans moved to a different house within the same county. Similarly, about 22 % of Canadians moved to a different housing unit within the same

[6] Data are for persons age 25–44. The comparable ratio of suburb-to-central-city movers to central-city-to-suburb movers was 1–2.7 in Montreal and 1–1.8 in Vancouver (Turcotte and Vezina 2010).

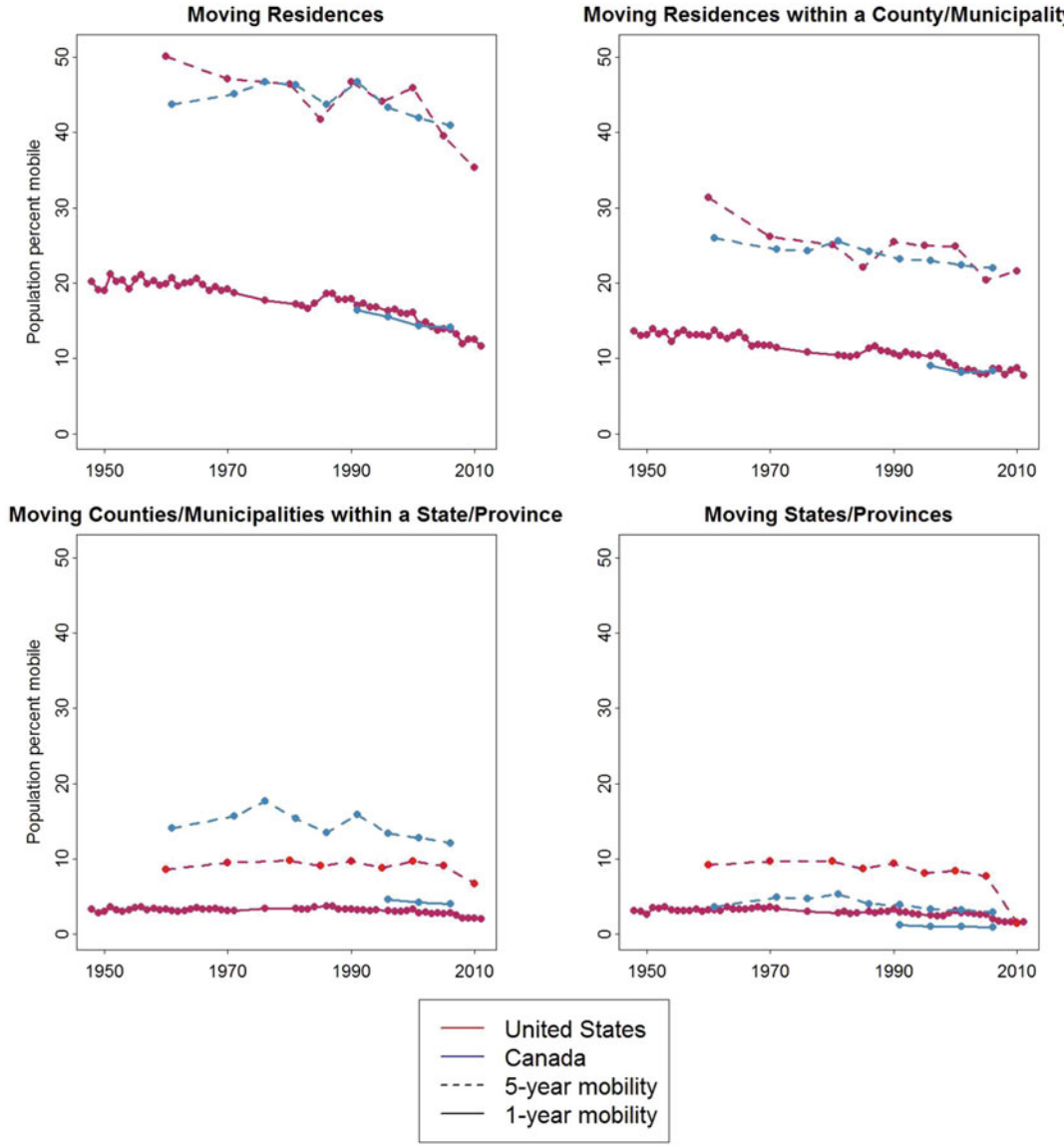

Fig. 19.11 Mobility in the United States and Canada by type of move, 1950–2010. Data for the U.S. are from the Current Population Surveys (U.S. Census Bureau 1950–2010) and the Decennial Census (U.S. Census Bureau 1960–2000). Data on 1-year mobility rates are not available for 1972–1975, 1977–1980, 1985, or 1995. Data for Canada from 1961 to 1981 are from Ledent's (1990) calculations of Canadian Census data. Data following 1981 are from the Census of Canada (Statistics Canada 1981–2006). One-year mobility rates are for persons aged 1 and over at the survey/census date. Five-year mobility rates are for persons aged 5 and over at the census date

municipality between 2001 and 2006 (see Fig. 19.11). Such high levels of short-distance mobility have earned a reputation for North Americans as "rootless." This reputation is perhaps shared by few other countries – most notably New Zealand and Australia – and has raised concerns about the repercussions for the erosion of social cohesion and civic engagement (Putnam 2001; Wuthnow 1998) and the effects of hypermobility on adolescent development (Long 1998).

Certainly less sensational, but no less important, is the fact that Americans and Canadians

have actually become decidedly less migratory over the past half-century, and less prone to short-distance mobility (see Fig. 19.11). For example, in the 1950s, about one-in-five Americans made some kind of move in any given year, and around 13 % moved to different house within the same county. By 2011, the overall annual rate of mobility was down to 11.6 % with just 7.7 % making an intra-county move. In contrast, the rate of short-distance (intra-municipality) mobility in Canada has remained fairly steady in the same time frame.

Much short-distance mobility is influenced by economic considerations; as shown in Fig. 19.8, many individual moves are likely motivated by the desire to be closer to economic opportunities or the effort to increase wealth through homeownership and access to areas with higher and more stable housing values. However, available evidence also suggests that non-economic forces likely play an equally crucial role in driving patterns of short-distance mobility. For example, the elevated risk of white out-mobility from neighborhoods with high concentrations of minorities (Crowder and South 2008), and native flight away from areas with large concentrations of immigrants (Crowder et al. 2012), cannot be explained by either individual-level mobility determinants or the economic conditions of the neighborhood. More generally, social determinants are also reflected in the life-course dynamics of short-distance mobility (Crowder 2001; Deane 1990; Long 1988; Rossi 1980). For example, levels of inter-neighborhood mobility are highest in young adulthood, especially at the transition to marriage and parenthood when proximity to good schools, services, and social amenities for children become increasingly important. Similarly, the relatively elevated level of short-distance migration in older ages, along with increasing evidence that proximity to aging parents is an important consideration for many in middle-adulthood, highlights the social considerations that shape short-distance mobility. And at least part of the profound negative impact of housing tenure on short-distance mobility is thought to reflect the greater social investment in local social networks among homeowners than among renters. The importance of socio-demographic determinants of mobility has not gone unchallenged, especially in light of some recent findings which attribute a minimal role of population aging or increasing rates of homeownership in explaining mobility declines since the 1980s (Molloy et al. 2011; Cooke 2012). However, even these studies report that it is "unwise" to dismiss the behavioral and life course components of mobility declines, and suggest that socio-demographic variables need to be included in any explanation for declining mobility (Cooke 2012: 3).

Non-economic forces are also apparent in the persistence of dramatic racial stratification in processes of short-distance mobility. While blacks are more likely than whites to make a short-distance move (refer back to Fig. 19.7), they are *less* likely than whites to translate their mobility expectations into an actual change of residence (Crowder 2001). Moreover, when they do move, blacks and Latinos are much more likely than mobile whites to move into neighborhoods characterized by high levels of poverty, elevated levels of racial isolation, and disproportionate concentrations of environmental pollution (Crowder et al. 2012; Crowder and Downey 2010; Crowder and South 2005). Part of this racial and ethnic stratification in mobility outcomes reflects group differences in education, income, and wealth, but large differences persist even when these socioeconomic differences are controlled. According to at least some observers, these residual racial differences in the actuation of mobility intentions and, especially, destinations reflect the influence of discrimination and other institutional barriers that limit mobility options for members of some groups. But there is also evidence that racial and ethnic differences in residential preferences – driven in part by racial differences in residential experiences and concerns about discrimination – are also likely important (Charles 2006; Clark 2009). Moreover, racial and ethnic differences in mobility outcomes may reflect different perceptions of, and knowledge about, residential opportunities available to movers. To date there has been very little research on the extent to

which these and other non-economic factors affect perpetually stratified patterns of short-distance mobility.

Conclusion

Perhaps more than any other region of the world, North America has been defined, and continually redefined, by internal migration. As in most regions of the world, internal migration flows have shaped not only the spatial distribution of North American populations, but also the social, political, and economic conditions in both sending and receiving locations. But the high rate of internal migration, ever-shifting patterns of origins and destinations, and the highly selective nature of most migration streams magnifies these migration effects in the North American context. While overall rates of migration in North America have declined fairly steadily in recent decades, populations in the United States and Canada remain among the most mobile in the world, suggesting that internal migration will remain a dominant social force into the foreseeable future.

Yet, despite the far-reaching impacts of internal migration processes in North America, our understanding of these migration processes remains quite underdeveloped. The standard story holds that internal migration has provided the primary mechanism through which hypermobile North American populations have been reshuffled in response to the shifting distribution of economic opportunities, and that, at the individual level, financial considerations are paramount in the decision to move. However, a careful look at many of the most pronounced migration trends in North America highlights the importance of non-economic forces. Most important here are the apparent influences of social and demographic conditions in sending and receiving locations on the emergence and continuation of migration streams, the role of political and social institutions in shaping opportunities for migration, and the fact that migration is often motivated, in part, by the desire to enhance social status as much as economic status.

We highlight these non-economic forces not to diminish attention to economic motivations of migration, but as a reminder that individual migration decisions and the population flows they define typically reflect a complex combination of economic and social motivators. We call for a course correction in the study of North American migration – a return to Lee's original conception of social factors as important pushes, pulls, and facilitators of migration, and a renewed appreciation of the multi-dimensionality of mobility processes. Indeed, research on migration in general would benefit from greater attention to the social, political, and other non-economic roots of migration decisions, and how these forces complement and interact with economic motives.

More specifically, we suggest three goals for future research. First, future research would benefit from more rigorous theoretical conceptualization of the role of non-economic factors, moving them out of the residual category of migration propensities that cannot be readily explained by economic pushes and pulls. For example, recent research has begun to conceptualize the role of location-specific cultural, environmental, and social amenities in migration decisions, with some researchers conceptualizing amenities as secondary considerations that operate once employment considerations have been satisfied, while others have conceptualized amenities as primary drivers of migration, at least for some demographic groups (see Chap. 2 by Wright and Ellis, p. 16).

Second, we call for a move beyond the tendency to view economic and non-economic factors in a simplistic additive framework to understand the often complex interactions between these forces. Certainly, the conceptualization of social networks and other non-economic factors as key facilitators and impediments to migration in Lee's original work points to social ties, access to information, and other social factors as important moderators of economic pushes and pulls. However, these interactive effects have received relatively little

attention in past scholarly literature. Our collective understanding of migration processes would benefit, for example, from additional research on the extent to which individuals with social networks and residential experiences that are most geographically constrained are least likely to move in order to take advantage of higher wages in other locations.

Finally, future research would do well to focus on assessing how the relative roles of economic and non-economic factors, and the interactions between these broad classes of factors, vary by individual sociodemographic characteristics. Together, these research foci will allow for the development of a stronger understanding of the migration processes that continually reshape the distribution of North American populations.

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Part IV

Emerging Policy Topics in Population Redistribution

Migration, Urbanization and Health

20

Elizabeth Nauman, Mark VanLandingham, and Philip Anglewicz

The massive and singular shift in the distribution of the world's population from the countryside to cities has recently passed the halfway mark. Since 2009, most of the world's population resides in urban areas, and the United Nations projects that the proportion urban will exceed two-thirds by 2050 (2012). The world's more developed regions are much further along in this transition than are less developed countries, where the pace of urban growth is now most rapid. The vast majority of the world's population growth in the coming decades will be absorbed by cities in the developing world. Meanwhile, both the absolute and relative size of rural populations in all regions of the world will decline by 2050 (United Nations 2012).

As people leave villages to settle in cities, the rural-urban landscape changes; both the size and quantity of cities are increasing, especially in developing regions. An important implication of this urban drift is its impact on population health. An extensive body of research suggests that rural-to-urban migration can influence health and well-being through its effects on affluence, exposure to new environmental risks and benefits, by stimulating change in culturally-based expectations and patterns of behavior, and by providing access to previously unavailable non-economic resources, such as education and training, new contacts, new ideas, *etc*. Clearly, these migration-induced changes have profound implications for the well-being of migrants, their families, and the sending and receiving communities. The timing, magnitude, and direction of these health-related implications are themselves dependent upon a wide range of contextual factors.

In the following sections, we discuss the state of current research related to migration, urbanization and health from a global perspective. We begin with a description of the demographic and administrative processes that contribute to urbanization. We then turn to some of the motives that underlie decisions to move from the countryside to the city, and the health consequences of these decisions for migrants, their families, and the urban destination communities. Next, we discuss some of the challenges involved in discerning cause and effect in migration and health research, and address potential limitations created by various forms of selection bias. We conclude with some recommendations for moving the field forward.

Demographic and Administrative Processes that Contribute to Urbanization

Urbanization occurs through three interacting processes: (1) natural increase, (2) rural-to-

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_20

urban migration and (3) reclassification. Natural increase is the population growth that occurs as a result of fertility rates exceeding mortality rates within a geographic area. It is a direct and indirect cause of urbanization. Natural increase in the rural population *indirectly* affects urban growth by driving rural-to-urban migration as a means of alleviating overpopulation relative to the availability of economic and educational opportunities in rural areas. Meanwhile, the rate of natural increase in the urban population *directly* impacts urban growth by virtue of the relatively young age structure that characterizes urban populations. Most migrants fall within the young adult age range, *i.e.*, 18–29 years old, which are also peak child-bearing years. Thus, even conventional fertility rates among young adult urban-bound migrants further contribute to natural increase in urban areas.

Internal migration from rural to urban areas directly contributes to a country's urban transition. As individuals and families move from villages to cities, the rural origin areas end up with fewer residents while the urban destination areas end up with more.[1]

Reclassification is an administrative mechanism by which urban status is conferred upon a formerly rural or peri-urban territory, often because the absolute population size or the population density exceeds a certain threshold. Interconnections between reclassification and the other two mechanisms are apparent: natural increase and rural-to-urban migration are demographic processes that increase the numbers of persons living in and near cities. Increasing density of peri-urban areas can then lead to reclassification as the densely-settled area expands geographically.

The relative contributions of these three mechanisms to urbanization vary across settings. Where fertility rates are high, natural increase contributes substantially to urban growth. Kenya, for example, is currently experiencing rapid urbanization with an urban growth rate of more than 4 % annually since the 1980s (United Nations 2012). While the migration of formerly rural residents to cities is a significant factor, there is a substantial fertility component to urban growth in Kenya, where the total fertility rate is around five children per woman (United Nations 2011). In contrast, in settings with rapid urbanization and low fertility, such as China, urban growth is driven almost entirely by migration and reclassification. Because of selection factors, *i.e.*, differences in characteristics of migrants compared to non-migrants (more on this below), the health implications of urbanization differ for cities growing by natural increase compared to those growing due to in-migration.

The Attraction of Cities to Some Rural Dwellers

The motivations underlying rural-to-urban migration are complex and variable. A primary draw is the concentration of many types of resources in urban areas. Rural-urban differentials in economic opportunities stimulate migration, not only for the benefit of migrants themselves, but also to bolster the economic status of rural households. Migration is a key economic strategy for rural households to reinforce their financial security through diversifying sources of income, including support from migrant family members (Massey et al. 1994; DeJong et al. 2002). Rural households can improve their economic well-being through remittances from household members working elsewhere, particularly in urban areas where migrants typically earn more than they would in their rural place of origin (Guest 2003). These remittances can have important health implications for rural populations since they can be used to improve living standards or to purchase health care services (Lowell and de la Garza 2000; Frank et al. 2009).

In addition to financial support, migrants also provide access to migration networks and information that can facilitate migration and employment for other members of the origin household and community (Lopez-Cordova 2004). Many

[1] Some cities also attract a significant number of international migrants that add to the urban population.

rural-to-urban migrants are linked into social networks that support migration. Based on the theory of cumulative causation, Curran et al. (2005) find that migrant social capital, in terms of migration experience at the household and village levels, influences migration propensity for other members of the households and villages. Migrant networks provide social capital, in terms of information and resources, which usually decreases the risks and costs of migration.

In addition to economic and social capital, rural-to-urban moves can increase migrants' human capital via education. Higher quality educational institutions are disproportionately located in urban settings, especially in developing countries. Even with the occasional extension of these educational resources into rural settings, expanded educational opportunities without corresponding employment prospects in rural areas leads to the eventual out-migration of those who acquire new skills and knowledge as they seek jobs that will reward this investment. Indeed, migration propensity, particularly urban-bound movement, generally increases with educational attainment (Guest 2003).

Personal reasons may also entice individuals to move to the city, especially youth, for whom migration can be an important part of their transition to adulthood. Because migration occurs more often in young adulthood than at older ages, coming of age events can be strongly influenced by migration (Beegle and Poulin 2011). Leaving the family home usually means less supervision by parents and elders and having more freedom and autonomy. Relative to the village, the social environment in the city typically offers more anonymity and a more diverse pool of peers and prospective mates. Urban societies also tend to have more permissive social norms with fewer cultural sanctions than more traditional rural communities. These differences in the socio-cultural climate of the city versus the village afford rural-to-urban migrants increased opportunities for dating and relationships, sexual experimentation, behavioral freedom, and financial independence.

A move from the village to the city is not equally attractive to everyone. Because migration is typically linked to economic or educational aspirations and the transition to adulthood, migrants are generally characterized by a unique socio-demographic profile, relative to the general population. The age composition of migrant groups reflects age selectivity; most migrants are young adults in their late teens and early twenties (Castro and Rogers 1983; Guest 2003; Long 1988; Tobler 1995). Migrants also tend to be unmarried, as research across a variety of settings has shown that individuals who are single, divorced, or separated are more likely to move than those currently married (Arnoldo 2004; Boerma et al. 2002; DeAre 1990; Guest 2003; Reniers 2003; Schachter 2004; Watts 1984). Gender composition varies across migration streams and differs by region (Hugo 1993). Women are as likely as men to migrate in the United States (Cerrutti and Massey 2001), and females dominate migration streams in Latin America (Guest 2003). While more men than women migrate in Africa and Asia (Chant and Radcliff 1992), female migration has increased in Asia, and females now constitute a majority of rural-to-urban migrants in some countries (Hugo 2003; Guest 2003). The increase in female migration has been associated with export-oriented development in Southeast Asian countries which increased opportunities for females to enter the urban labor force (ESCAP 2002; Jones 1993; Lim 1993; Phongpaichit and Baker 1995).

Strains at Urban Destinations

While the multitude of individual and family-based decisions that result in a move to the city are rational *ipso facto*, might there be some limits to the density of inhabitants that cities can bear? Is the modern city in danger of becoming an increasingly degraded communal space akin to the one that Hardin warned of in his classic *The Tragedy of the Commons* (1968)?

Much of this concern results from the unprecedented scale and pace of urbanization during the past few decades. "The vast size of the largest mega-cities, in particular, receives" an enormous

amount of attention (Cohen 2006) in spite of the fact that these largest cities account for only about 10 % of the world's urban population (United Nations 2012); the fastest growing cites are those with less than five million residents (National Research Council 2003). That cities in this size range have proven to be manageable should brighten some of the gloomiest forecasts regarding increasing urbanization. Pessimism about the sustainability of growing cities should also be tempered somewhat by a recognition of the many structural efficiencies that cities provide to their residents *vis-a-vis* rural areas (Glaeser 2011). Cities serve as economic centers with better employment and educational opportunities than most rural areas, because it is more efficient to locate these institutions in areas with dense population and concentrated infrastructure. With greater population density comes lower per capita costs for public services and infrastructure. But such efficiencies of scale are not limitless and are not without negative consequences. Areas with concentrated resources are expensive to live in, so those who need to access these resources but cannot afford the cost of living may be marginalized into undesirable urban settings. In some cities, slums are growing at a faster rate than the general urban population (Zulu et al. 2011). However, as Saunders argues in *Arrival City*, moving to even relatively marginalized sections of cities can mean a better lifestyle for those who left behind a life in rural poverty (2012).

Concentrated pollutant byproducts of urban and peri-urban industries are another negative consequence of the concentration of people and jobs in urban settings. Concurrent with urbanization, industries have grown much faster than have strategies to manage and mitigate their environmental impacts. Formidable traffic congestion resulting from failures of careful urban planning is another structural challenge in cities. Rapid urban growth usually exceeds the capacity to develop infrastructure for adequate public transportation and other means of reducing the traffic burden in cities.

The negative consequences of urbanization are not entirely structural. Concurrent with the growing urban population in developing regions, an increasing risk of cardiovascular disease and non-communicable diseases, such as obesity, diabetes and heart disease has occurred (Murray and Lopez 1997; Lopez et al. 2006). Social and behavioral research that investigates the underlying causes of such epidemiological trends has focused on differences in lifestyles between urban and rural areas: urban residents have more sedentary lifestyles and are more likely to consume high-fat processed foods than are their rural counterparts (Fezeu et al. 2008; Lopez et al. 2006; McMichael 2000; Sobngwi et al. 2004).

An association between urban growth and increasing mental health problems has been noted but not extensively investigated (McKenzie 2008). Empirical studies have documented elevated mental illness in urban settings, relative to rural areas, including higher prevalence of anxiety, depression, psychosis, and schizophrenia (Sundquist et al. 2004; Boydell and McKenzie 2008; Krabbendam and Van Os 2005; Vega et al. 1998). A study conducted in the megacity of Sao Paolo, Brazil found that urbanicity[2] and exposure to crime are correlated with mental disorders, and the researchers identified migrants living in impoverished parts of the city as a particularly vulnerable group (Andrade et al. 2012). The susceptibility of urban poor to mental health detriments is further suggested in studies that have found significantly higher rates of psychiatric and behavioral disorders in urban slums, relative to non-slum urban settings and rural areas (Fleitlich and Goodman 2001; Mullick and Goodman 2005).

While potential explanations for increased mental disorders in urban settings are difficult to substantiate, migration provides several plausible mechanisms. Community-level effects of population mobility, including reduced community stability and greater social fragmentation, have been linked with higher rates of mental

[2] Urbanicity is the degree to which a geographical area is urban. Assessments of urbanicity usually take into account population density, infrastructure, and availability of goods and services (Dahly and Adair 2007).

illness (Silver et al. 2002; Allardyce et al. 2005). Studies have also connected higher risk of mental health conditions with economic circumstances, such as socio-economic inequality and relative deprivation, in which migrants tend to be among the disadvantaged at urban destination (Boydell et al. 2004; Eibner et al. 2004). The strains associated with the migration experience and one's adaptation to the urban setting may also impact mental health. The process of acculturation can lead to tension and distress, which may induce psychological dysfunction in some individuals (Bhugra and Minas 2007). While moving to a city within one's own country does not generally require the learning of a new language, adapting oneself to an urban setting after a lifetime in a rural one can be stressful. On the other hand, research has also found that rural-to-urban migration can improve mental health status (Nauman et al. 2015). In particular, perceived advantages of city life versus rural life, such as earning more money and having more freedom, are associated with improved mental health status for rural-to-urban migrants (Nauman et al. 2012).

Does Rural-to-Urban Migration Affect Health? Taking Selection Effects into Account

One of the most challenging – and interesting – features of the relationship between rural-to-urban migration and health involves selection effects: the health status of migrants may differ from that of non-migrants because the former differ from the latter *even before they migrate*. In other words, there are two possible mechanisms that could explain an observed relationship between migration and health: (1) the process of migration can affect physical and mental health status; or (2) *a priori* health status can influence subsequent migration. Most studies focus on the first mechanism but ignore the second by failing to account for potential selection factors that determine who migrates. Complicating matters further is another potential selection mechanism, which is the effect of post-migration health status on return migration. This has been labeled the "salmon bias" effect, drawing upon the metaphor of salmon migrating from the fresh water streams where they were hatched to feed in the ocean and then returning to their place of origin to spawn. Since the empirical literature focusing on this mechanism finds that it is often the more compromised and disillusioned migrants who return to origin (in contrast to salmon, among which only the most fit make the return trip), we propose to instead call this the "Midnight train to Georgia" effect.[3]

Selectivity in rural-to-urban migration and return migration to rural villages can confound the effects of migration on health. First, certain demographic characteristics and socioeconomic status render some people more likely to migrate than others. Similarly, health status may also vary systematically between those who choose to migrate and those who stay at origin (Jasso et al. 2004; Landale et al. 2000; Palloni and Morenoff 2001). Empirically, this turns out to be the case. Per the "healthy migrant hypothesis," migrants are typically healthier than the general population (Lu 2008). Without attention to this *a priori* difference, the relationship between migration and health may appear to be different than it really is. The observation that migrants are healthier than non-migrants might be incorrectly attributed to positive effects of moving to the city, when in fact the difference is due to selection (*i.e.*, if the migrants were already healthier before they moved). Therefore, selection must be taken into account in order to determine the extent to which the migration process itself impacts health status.

Regarding the "midnight train" effect, selective return migration by less healthy migrants may also lead to erroneous conclusions about the relationship between migration and health

[3] "Midnight Train to Georgia" is a 1973 number-one hit single by Gladys Knight and the Pips. The boyfriend of the song's narrator is a musician who moved from his native Georgia to Los Angeles to become a "superstar, but he didn't get far". He decides to give up, and "go back to the life he once knew."

(Abraido-Lanza et al. 1999). Successful migrants (*i.e.*, those who stayed at destination) may be healthier than those who returned (Palloni and Arias 2004; Turra and Elo 2008). If so, comparing the health status of migrants who stayed at destination with that of their non-migrant counterparts may produce inflated estimates of migration's effect on health, because some relatively less healthy migrants are excluded from the comparison if they returned to origin. To address possible bias due to the "midnight train" effect, the health status of return migrants needs to be taken into account.

These three potential mechanisms of the relationship between migration and health are illustrated in Fig. 20.1. The first box in the diagram illustrates the selection effects of health on subsequent migration. Individual health status among members of the population at origin may influence who migrates versus who stays. The "healthy migrant hypothesis" suggests that health affects migration via a selection process through which those who are healthier or otherwise more robust are most likely to undertake migration, given the strains and difficulties that it entails. The dashed line that connects the first and fourth boxes in the framework indicates correlation between *a priori* health status and post-migration health outcomes (Mechanism 1). Because migrants typically constitute a healthier and more resilient subset of the population, they may retain this health advantage during and after migration and therefore may continue to exhibit healthy outcomes after the move.

The migration process and adjustment to a new physical and social environment at destination may cause changes in migrants' physical and mental health status. The third box in the diagram represents the effects of migration *per se* upon health (Mechanism 2).

Finally, post-migration health status may influence who stays at destination and who returns to origin (Mechanism 3). The "midnight train" effect postulates that the relatively less healthy migrants are more likely to return while those who fare well after a rural-to-urban move are more likely to stay in the city.

Does Rural-to-Urban Migration Affect Health? A Review of Recent Empirical Evidence

Differentiating the effects of the three mechanisms described above presents formidable methodological challenges for studying the impact of migration on health. Devising a proper research design to distinguish the "real" effects of migration on health from those due to selection is challenging. Obviously, a randomized controlled trial design, in which individuals are allocated into *migrant* and *non-migrant* groups, is virtually inconceivable.[4] An alternative research design is a panel study of migration, in which pre-migration data as well as post-migration data are collected. This approach is expensive, in part because the baseline sample must be very large in order to capture enough individuals who subsequently migrate. Moreover, tracking migrants and finding them at destination requires substantial effort and resources. Thus, existing research on the topic that avoids the confounding effects of selection is very limited.

Cross-sectional studies dominate the empirical literature. In one such study, rural-to-urban migrants working in a Chinese city had worse mental health status than permanent rural dwellers (Li et al. 2007b). Many cross-sectional analyses also show disadvantages for rural-to-urban migrants, when compared with longer-term urban residents, on both physical and mental health indicators. Analysis of data from 15 developing countries revealed that children of rural-to-urban migrant women generally have much poorer survival chances than children of lifelong urban residents (Brockerhoff 1995). In Ho Chi Minh City, Vietnam, recent migrants

[4] Random assignment of subjects into treatment (migration, in this case) and control groups ensures that personal characteristics do not differ, on average, between the two groups. In the real world, because migrants are self-selected based on a rational set of factors that influence the decision to relocate, selection effects are formidable (we discuss this issue further in the final sub-section titled "Moving Forward").

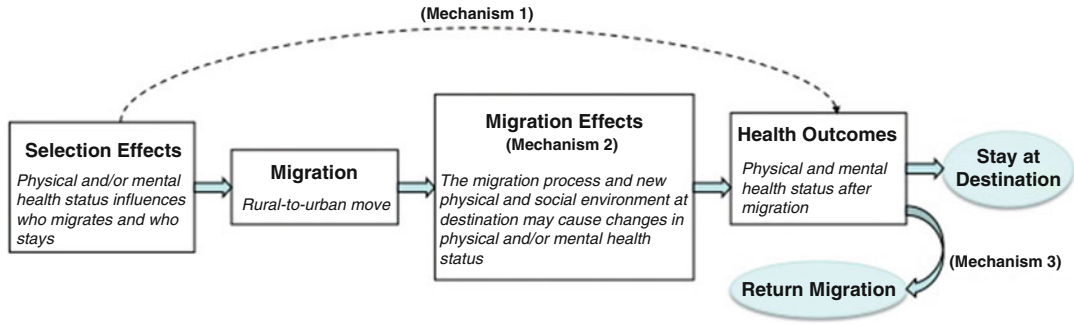

Fig. 20.1 The relationship between health and migration

from rural communities fared worse than longer-term city dwellers on self-reported measures of both physical and mental health status (VanLandingham 2003). However, due to the potential confounding effects of selection, these observed differences in health status cannot necessarily be attributed to migration. Because these studies only assessed post-migration health status, it is unknown whether migrants already differed from their rural and urban counterparts before they moved. Moreover, whether migrants' health changed from pre- to post-migration is also unknown.

Longitudinal studies are capable of providing more convincing evidence that rural-to-urban migration does indeed affect mental health. However, the results differ across settings. Migrants in Thailand experienced an improvement in mental health status relative to those who stayed in rural areas, while labor migrants in Indonesia were more likely than rural non-migrants to experience depressive symptoms. Both of these studies assessed pre- and post-migration health status and are therefore able to distinguish between selection effects and "real" effects of migration on health. Neither study found evidence that rural-to-urban migration affects physical health outcomes in the short term (2–3 years), but both assessed young adults – an age group that is generally more resilient to physical ailments (Lu 2010; Nauman et al. 2015).

Other studies of migration and health focus on factors that might mediate or otherwise explain the empirical relationship. For example, more permissive urban norms might facilitate sexual behaviors that put a former rural dweller at heightened risk for HIV. Empirically, moving between rural and urban areas is indeed associated with higher levels of sexual risk behaviors (Anglewicz et al. 2014; Brockheroff and Biddlecom 1999; Li et al. 2007a), which provides a compelling explanation for studies that find higher HIV prevalence among rural-to-urban migrants than rural non-migrants (Lurie et al. 2003; Nunn et al. 1995). However, Anglewicz (2012) investigates an alternative possibility that higher HIV prevalence among migrants may be due to the selection of HIV-positive individuals into migration. Using longitudinal data, he found that HIV-positive individuals in Malawi are indeed more likely to migrate than uninfected individuals, suggesting that the relationship between migration and higher HIV prevalence is at least partly due to selection effects.

Dietary habits and anthropometric measures have also been examined in the context of rural-to-urban migration on the presumption that migrants' dietary habits are likely to change, which can have long-term implications for their physical health. Studies have shown that intake of food energy is higher for rural-to-urban migrants than for rural residents, but lower for migrants than for urban dwellers (Bowen et al. 2011; Giahi 2001). A systematic review of 18 studies that examine associations between rural-to-urban within-country migration and cardiovascular risk factors in low and middle income countries found that biomarkers such as blood pressure, BMI, obesity and cholesterol

generally followed a gradient with the highest levels observed for urban dwellers, medium levels for rural-to-urban migrants, and lower levels for rural residents (Hernandez et al. 2012). But other research on weight-related outcomes has produced mixed results. While some have observed higher body mass index (BMI) and higher prevalence of overweight and obesity among rural-to-urban migrants compared to their rural counterparts (Giahi 2001; Miranda et al. 2011; Yamauchi and Umezaki 2005), similar studies have found that underweight (in adults) is associated with rural-to-urban migration (Giahi 2001; Khan and Kraemer 2009). The results are also inconsistent when migrants are compared with urban dwellers. In Indonesia, rates of overweight and underweight did not differ between urban non-migrants and recent or lifetime rural-to-urban migrants (Resosudarmo et al. 2009). Other studies have documented lower obesity prevalence among rural-to-urban migrants compared to urban residents (Ebrahim et al. 2010; Miranda et al. 2011).

The hypothesis that rural-to-urban migration exacerbates cardiovascular risk factors hinges on the related hypothesis that migration leads to dietary changes, which in turn affect cardiovascular health outcomes. Because dietary differences between rural and urban populations are well documented, the latter hypothesis – that migration leads to dietary changes – might seem compelling. However, with a paucity of research that collects pre-migration data on dietary habits and related health status, it remains unknown whether selection effects may account for some of the observed differences in physical health outcomes between migrants and their rural or urban counterparts.

In the longer term, features of the urban destination are likely to continue to affect migrants' health as they remain in the city. Over time, the health status of migrants may become increasingly similar to that of the host population due to acculturation, accumulated environmental impacts and long-term behavioral changes (Gushulak and MacPherson 2006). This hypothesis is supported by research showing that the gap in health status between migrants and the receiving population narrows as they spend more time in their post-migration residence (Stephen et al. 1994; McDonald and Kennedy 2004; Perez 2002).

Moving Forward

The recent pace of change in migration is far exceeding changes in fertility and mortality, and the increasing mobility and urban character of populations will have profound and long-lasting impacts on health and well being, not only for migrants, but also for their families and their sending and destination communities. As Glaeser (2011) and others have noted, not all – or even most – of these changes will necessarily be negative, since cities provide efficiencies of scale in the provision of essential services and a critical mass of human capital and ingenuity that can perhaps be effectively leveraged to address new health challenges presented by rapid and extensive urbanization. One key feature of an effective concerted effort to address these challenges will be high quality social science research to evaluate the extent and pace of migration and urbanization, and to accurately evaluate the impacts of these changes upon health and well being. Accurate assessment of the extent and pace of migration and urbanization is important, in part because political power, *i.e.*, the control of resources, often remains embedded within rural communities long after a population shift to urban areas has occurred (Mann 2006). Mann discusses the U.S. political landscape in his recent volume, but similar tensions between an expanding highly-educated urban population and a shrinking rural population with dwindling opportunities are currently playing out in Thailand and in other rapidly urbanizing newly-industrialized countries. It is also critical to accurately assess the *impacts* of rapid migration and urbanization upon individual and population health. The challenges of doing so are formidable, in part because much of the available data are static and cross-sectional while the processes they are meant to measure are dynamic and

sequential. The potentially confounding effects of a variety of selection biases loom large here. It is important that the field moves to state-of-the-art research designs to assess these impacts.

Much of the existing research on migration uses cross-sectional data and compares migration-related outcomes between non-migrants and migrants (after migration). Cross-sectional data have the advantage of being the most readily available; Demographic and Health Surveys, for example, include several questions that permit the identification of migrants. There are, however, several disadvantages to this approach, the most prominent of which are that a cross-sectional approach does not allow (1) a distinction between whether migration affects health or *a priori* health status influences subsequent migration, and (2) an examination of changes in health status over time.

Longitudinal studies can address these key limitations. One common approach is used by Demographic Surveillance Sites (DSS), which involve a series of censuses for a specific geographic area (examples are Boerma et al. 2002; Collinson et al. 2007; Kahn et al. 2007). The longitudinal design provides leverage for observing migration patterns and assessing health changes over time, but typically only for the individuals and families living within the defined area at the time of the census (Boerma et al. 2002; Collinson et al. 2007). Migrants are likely to experience different health outcomes – compared with those who stay – both at destination and also once they return home (Clark et al. 2007; Palloni and Arias 2004), but the post-migration health status of those who leave the surveillance area is not captured in the typical DSS. These DSS designs are, however, well-suited to an extension of the surveillance system that incorporates following migrants who leave the defined area (White 2009).

Other longitudinal approaches do engage in migration follow-up efforts (examples of such study designs are Anglewicz 2012; Beegle et al. 2011; Curran et al. 2005; Lu 2010; Nauman et al. 2015; Thomas et al. 2001). In these studies, individuals who migrate from the site of a longitudinal panel survey are traced and interviewed in their new location. Such study designs address common methodological challenges faced in migration and health research. For example, examining the extent of selection bias requires data on the health of individuals *prior* to migration. Identifying the *effect* of migration on health status, as opposed to merely examining differences in health status for individuals after migration compared to non-migrant populations, is also facilitated by longitudinal data on migrants before and after they moved. However, longitudinal data that assess health status for individuals before and after migration (*i.e.*, at origin and destination) are expensive to collect and thus are relatively rare. These data are also not without potential limitations: a critical issue for these studies is the level of success in tracing migrants, as loss to follow up can also bias results.

We use this approach in work that examines the effect of rural-to-urban migration on the physical and mental health of young adults in Thailand (Nauman et al. 2015). By measuring pre-migration health status, we are better able to estimate the extent to which *a priori* health status influenced who subsequently migrated versus those who stayed at origin. The results demonstrate a selection effect: before they moved, migrants' mental health status was worse than those who stayed in the rural origin communities. After moving to the city, however, the disadvantage in mental health status for migrants – *vis-à-vis* the rural comparison group – disappears: migrants experience an improvement in mental health status from pre- to post-migration, and their mental health status after migrating is comparable to the level observed for the rural comparison group. This suggests that, before they moved, migrants may have been disaffected with rural life. This disaffection may have enticed them to migrate to the city, leading to an improvement in mental health that negates the original deficiency they suffered while living in the rural areas.

We note that the results of this study would differ – and lead to inaccurate conclusions – with a cross-sectional approach using only one wave

of our data. In terms of post-migration mental health status, migrants are slightly better off, but not significantly healthier than their rural counterparts. If this comparison was made without observing pre-migration health status, there would be no evidence to suggest that migration affects mental health.

In addition to longitudinal designs, the exploitation of natural experiments to minimize the potentially confounding effects of selection holds much promise. As noted above, randomized controlled trials (RCTs) are infeasible for complex sequences of events occurring in real time in the real world. However, RCTs do sometimes provide a useful paradigm for controlling influences that are extraneous to the processes of central interest. Fu and VanLandingham (2012) exploit a natural experiment design to help control for potential *a priori* differences between individuals who left Vietnam and those who stayed after the collapse of the South Vietnamese government. They use this approach to help discern the physical and mental health consequences of a move to the U.S. *vis*-à-*vis* remaining in Vietnam. Similarly, Stillman et al. (2009) exploit a migration lottery to help control for pre-existing differences in their study of the effects of migration upon mental health.

Technological developments are making possible a wider collection of biomarker or "objective" measures of health to expand upon self-reports and anthropometric indicators that are more longstanding. Blood spots are especially promising, since they are minimally invasive, rapidly declining in price, and are available for an expanding array of measures for physiological functions involving neuroendocrine, cardiovascular, metabolic, and immune/inflammatory systems (McDade et al. 2007). The combination of this expanding array of objective measures of health status combined with increasingly sophisticated research designs make possible a transformation of social science research into this central feature of modern day population dynamics and well-being.

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Migration and the Environment

21

Lori M. Hunter and Raphael Nawrotzki

Migration and the Environment

Recent public and policy concern with the implications of contemporary climate change have fueled a surge in scholarly attention to the environmental dimensions of migration. In the past handful of years, at least two special issues of key journals have been devoted to the migration-environment association.[1] Such attention is warranted.

Consider rural regions of less developed settings, in which millions of households depend daily on natural resources from local environments for both sustenance and for materials supporting livelihood activities. Clearly, a decline in availability or predictability of such resources will impact livelihood decision-making, potentially fueling migration. Shift your mental image now to settings lacking this direct local dependence such as major metropolitan areas of the U.S. upper Midwest. Even so, here the environment also shapes location decisions as seasonal migrants leave North America's snowy winter regions toward the sunny climate of the arid southwest.

Yet environmental factors related to migration decision-making have been, for years, mostly sidelined by migration scholars. With a long-term focus on socio-economic, cultural and political factors, migration research even in resource-dependent regions has tended not to extend to consideration of contextual factors. Of course, a key challenge, as in any migration research, is disentangling various influences and context as intertwined with other forces. Even so, neglecting consideration of environmental factors misses a potentially central aspect of migration's causes and consequences. Other challenges relate to measurement – reflecting environmental characteristics within quantitative modeling efforts often requires a skill set outside of demography and, therefore, necessitates interdisciplinary work.

This review offers a summary of the state of knowledge regarding the association between migration and environmental factors, as well as a critique. We tour terminology, classic and contemporary conceptual frameworks, recent empirical results, as well as offering a discussion of methodologies often used by migration-environment researchers. We then explore methodological and substantive gaps while also bringing the critique to the realm of science-policy

[1] The December 2010 issue of *Population and Environment* presented a collection of papers on "Human Migration and the Environment," while a 2011 supplement of *International Migration* was devoted to "Environmental Induced Migration in the Context of Social Vulnerability".

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_21

disconnect through discussion of contemporary political dialogue around climate change. It is our hope that this review lays a foundation for future academic work, while also offering a call to action.

Multiple Meanings of "Environment"

First, some terminology. The environment can take multiple meanings within migration scholarship, and can incorporate either, or both, natural and human-created landscapes. For example, some migration research focuses on the social environment, considering community context as related to migration decision-making and/or the ways the social environment is, itself, shaped by migration. This work has shown, for instance, that social bonds shape migration intentions (Oh 2003) and that the relative impoverishment of metropolitan neighborhoods shapes destination decisions within cities (South et al. 2011). Here, social environments shape migration processes. Alternatively, migration impacts the social context as evidenced by recent work documenting enhanced racial stability at the community level brought about by the in-migration of higher-income whites to previously low-income neighborhoods (Ellen and O'Regan 2011). In general, we might consider this work as focusing on neighborhoods' "social ecology" (Weden et al. 2011).

Second, some social scientists examine the built environment as a contextual factor that shapes residential satisfaction and, by extension, migration propensity. Work along these lines is often found within environmental psychology and public health literature. As illustration, factors examined include residents' satisfaction with building density within a neighborhood (Hur et al. 2010), perceptions of hardscape (Kweon et al. 2010), and links between the built environment and health behaviors (for a review: Renalds et al. 2010).

Nonetheless, our focus within this review is on aspects of the natural environment which shape, or are shaped by, human migration. We argue that this is the contextual characteristic which has heretofore received least focus within migration research. In our case, the natural environment refers to biophysical characteristics and systems, especially as manifest within a particular locale – perhaps specific to a village in a setting where shared communal land provides necessary natural resources – or specific to a region if regional employment opportunities in the formal sector are shaped by weather patterns and associated agricultural productivity. Reuveny and Moore's (2009) four categories of environmental factors, specifically related to environmental disamenities, are useful here. Migration may be reciprocally related to, for example, cumulative environmental degradation (e.g., land scarcity, degradation, air pollution); weather-related natural disasters (e.g., storms);, production accidents (e.g., chemical spill), and/or resource-related development projects (e.g., artificial lakes).

Of course, contextual factors are themselves intertwined and also related to myriad socioeconomic processes acting upon migration decision-making. As such, disentangling the natural environment as a predictor of migrant behavior is challenging at best (Jonsson 2010). This scientific challenge is reflected in a broader recent dialogue regarding the most accurate terminology for portraying individuals and households who have migrated at least in part due to environmental conditions.

"Environmental Refugees" or "Environmental Migrants"?

Early media, activist, and some policy reports of mass migration resultant of climate change spawned the alarmist term "environmental refugees" (Hartmann 2010). Warnings of large-scale dislocation due to sea-level rise and extreme events received popular attention and media coverage, although they tended to be less grounded in empirical reality. Further, the term "refugee" implies persecution and movement crossing international boundaries – both characteristics that do not typically characterize

migrants relocating due to inhospitable natural environments (Renaud et al. 2011).

"Environmental migrants" represents the terminology more often used today to describe households that have experienced an environmental "push." Clearly there is tremendous variation in the extent of the push, and the ways in which environmental factors interact with other socio-economic, political and cultural forces. A useful means of considering environmental migration is on a continuum of forced to voluntary, and as related to chronic or extreme events (Hugo 1996; Lein 2000). Mandatory evacuation in the case of natural disaster would clearly represent forced migration, while a multi-year drought gradually reduces livelihood options potentially resulting in voluntary migration. Renaud et al. (2011) provide a full discussion of this continuum, in addition to exploration of reflective terminology such as "environmentally-motivated" or "-forced" migration. They argue that clarification of the role of environmental conditions and change within migration decisions is essential for informed policy and programmatic response (Renaud et al. 2011).

Theoretical Frameworks Engaged Within Migration-Environment Scholarship

Along lines similar to the "environmental refugee/migrant" discussions, migration theories and frameworks can usefully be categorized in maximalistic or minimalistic approaches as related to their inclusion of environmental dimensions (Suhrke 1994). The *maximalist* view posits environmental degradation as a direct cause of large-scale displacement. The *minimalistic* approach to the migration-environment association emphasizes that migration is not a monocausal phenomenon and that environmental change as context generally contributes indirectly in combination with other factors (Suhrke 1994). This approach typifies most migration-environment research (Jonsson 2010), including that undertaken within the variety of theoretical traditions reviewed next.

Migration scholars can find theoretical guidance in classic theoretical frameworks, although most don't emphasize environmental factors per se. Still, closer examination reveals that consideration of broader context is not new, although not historically emphasized (Hunter 2005). For example, Petersen (1958) suggested five broad classes of migration termed primitive, forced, impelled, free, and mass migration. The migration-environment connection is recognized only as a form of "primitive migration" shaped by "man's inability to cope with natural forces" (Petersen 1958: 259). For agrarian populations, Petersen mentions two distinct push factors, sudden impacts such as droughts or insect infestation, and gradual impacts such as the Malthusian pressure of a growing population on land availability.

Wolpert (1966) placed a greater emphasis on environmental factors and described migration as a response to stress between household needs and local environmental characteristics. He developed an ecological system model accounting for the positive or negative effect of environmental factors on the migration decision. However, Wolpert's framework was developed predominantly for the urban context and, therefore, key environmental forces considered were traffic congestion, air and water pollution, lack of open spaces, and noise levels.

Additional guidance can be found within other classic migration theories, such as those by Speare (1974) and de Jong and Fawcett (1981). Speare suggests that "members of individual households can be viewed as tied to a particular location by bonds to other individuals, attachment to the particular housing unit, attachment to a job, attachment to a neighborhood-based organization or other local bonds" (Speare 1974: 175). Further Speare explained that the bonds' strength is reflected in a general level of satisfaction, which shapes the likelihood of an individual and/or household considering relocation.

Probably the most commonly engaged framework, even if implicitly, is the neoclassical (Lawson 1998; Silvey and Lawson 1999) or rational choice (Gidwani and Sivaramakrishnan

2003) approach that assumes potential migration-decision making entails cost/benefit calculations. As Hunter (2005: 280) summarizes, "individuals might accept somewhat lower pay to reside in a location with environmental amenities; conversely, individuals might have to receive higher compensation to continue to live in an environmentally unattractive or hazardous locale." Jonsson (2010) explains that the New Economic theory takes into account a wider spectrum of migration motives and emphasizes the importance social factors, such as place attachment, and family/household variables in affecting migration decisions (Brown and Bean 2006).

Most common within the Human Geography and Anthropological literature, Political Ecology also emphasizes the multidimensional (and unequal) nature of population-environment relationships more generally (Robbins 2004). Political Ecology highlights the role of politics and power structures in controlling access to resources. As related to migration, an example engaging Political Ecology is Sanderson's (2009) analyses of globalization and foreign direct investment in the Ghanaian mining sector, related large scale environmental degradation, and subsequent migratory response particularly as impacted by declining global timber prices.

Also concerned with the impact of power on the environment-migration nexus is a recent framework developed by Carr (2005) based on a Foucauldian perspective. Carr argues that environment, economy, and society are linked within migration decision-making through local manifestations of power and, to fully understand migration decisions, one must gain access to the local power/knowledge within which the migration possibility is considered. Carr uses findings from qualitative research in three villages in Ghana to illustrate this interplay. Environmental degradation, combined with the collapse of the logging industry in the study's Ghanaian villages, threatened the social status of male household heads due to unemployment. This power shift was fundamentally the motivation for migration to nearby villages with greater opportunity.

As a final conceptual framework engaged within migration-environment research, the Sustainable Livelihoods framework considers access to natural capital together with financial, physical, human, and social capital as determinants of a household's livelihood strategy (Carney et al. 1999; De Sherbinin et al. 2008). Under conditions of livelihood insecurity, perhaps related to a scarcity of natural resources, a household is likely to diversify their livelihood strategies which might include the migration of a family member or relocation of the entire household (Massey et al. 2010). Of course the availability of natural capital interacts with the variety of assets at a household's disposal, while there is also an important reciprocal relationship at work. Qin (2010), for example, observes that, in *destination* areas, migrants differ from non-migrants in their livelihood strategies (e.g., consumption patterns, use of firewood, agricultural intensification), which leads to distinct environmental outcomes in terms of changes in land quality, soil erosion, and forest regrowth.

Evidence of Environmental "Push" Factors

Environmental factors have shaped migration since early human history. Consider the ancient Sahara. Archaeological and paleo-anthropological evidence suggests that humans migrated as shifts in the monsoon allowed them to penetrate deeper into the desert. Alternatively, periods of droughts forced retreat in search of water and pasture – much like contemporary nomadic populations (Brooks et al. 2005; Gila et al. 2011). More recent examples are also useful. Here, consider the Dust Bowl. Severe drought in the U.S. Great Plains from 1931 to 1939 led to massive soil erosion and drastic reduction in soil productivity. Winds filled the air with billowing clouds of dust, burying farm equipment and buildings. Hundreds of thousands of residents left the Great Plains, establishing new homes in more productive areas (Gregory 1989; Gutmann et al. 2005; Baumhart 2008).

As illustrated by examples of the Sahara and the U.S. Great Plains, much migration-environment research represents geographic case studies, focused on regions typically characterized by livelihood reliance on proximate natural resources. These studies engage both quantitative and qualitative methodologies, often operating at the household scale. Other work taps into historical analogs, such as the Great Plains example, to consider what future climate change might mean for population mobility. Mobility as related to natural disasters also provides a lens through which to examine the migration-environment connection, and scholars have also engaged a macro perspective to yield empirical simulations of migration particularly in light of climate futures. The categorization of empirical work on migration-environment along these geographic and methodological lines facilitates the following review.

Household-Level Case Studies of Migration-Environment Linkages

In resource-dependent regions, cumulative processes of environmental degradation and declining productivity of local natural resources severely constrains livelihood options. Households exposed to such conditions may strategically diversify with some household members migrating in search of opportunity elsewhere (Abdelali-Marini et al. 2003; Bilsborrow 2002). Indeed, existing scholarship links land availability and productivity to livelihood decline and migration in a variety of regions across the globe, including within Asia, Central and South America, as well as Africa.

As an example, land tenure policies in the Ecuadorian Amazon represent a "push" factor for young migrants who engage in temporary labor migration as means of amassing capital to purchase land (Bates and Rudel 2004). With a focus on the bisected Hispaniola island, Alscher (2011) examines distinctions in migration-environment patterns in contrasting Haiti and the Dominican Republic. The poorest households facing livelihood stress tend to migrate internally – the stress is predominantly related to lack of economic viability in rural regions which is, in turn, related to the dramatic loss of topsoil due to rampant deforestation (also livelihood-induced). Still, Haitian migrants are beginning to cross the international boundary that bisects the island to move onto land vacated by Dominican migrants since land pressures are far less intense across the border.

Across the globe, fragmentation of land holdings in Syria also appears to shape human capital decisions since land shortages often "push" males to migrate to urban areas and neighboring countries (Abdelali-Marini et al. 2003). A similar dynamic has been identified in rural Thailand; VanWey (2003) finds that households with smaller landholdings diversify their livelihoods through migration in order to supplement rural income. And in rural Benin, insecure land tenure plays a central role in continued internal migration among households already pushed from degraded origins (Doevenspeck 2011).

Of course, land *access* does not ensure productivity and, in this way, some scholars have linked precipitation patterns, as a force shaping agricultural potential, to migration patterns. Indeed, migration from north to south Ghana is predominantly environmentally-induced, with natural resources acting as a "pull factor" within southern regions that offer more productive land. The "push" of drought is demonstrated in Burkina Faso where residents of drier regions are more likely to engage in both temporary and permanent migrations to other rural areas, as compared to residents of high-precipitation regions. In addition, short-term rainfall deficits increase long-term migration to rural areas but have the opposite effect on short-term moves to distant destinations (Henry et al. 2004). The 1983–1985 drought in Mali revealed similar patterns – a dramatic increase in short-term cyclical migration as well as increases in the migration of women and children (Findley 1994).

Of course, drought shapes, and interacts with, poverty to ultimately determine the level of household vulnerability. In Niger, droughts lead to a vicious cycle of unsustainable levels of

pressure on local natural resources, resulting degradation, intensification of poverty and eventually migration (Afifi 2011). Similarly, in the face of prolonged drought in rural Ethiopia, households with diversified livelihoods resist distress migration longer. Survival strategies included shifts in consumption patterns, using food reserves, seeking non-farm employment, selling livestock, borrowing food, selling household farm/equipment, and gathering wild fruit. A threshold was apparent, however, after which coping options disappeared and all households, regardless of socioeconomic status, were affected and migration was likely (Meze-Hausken 2000).

Importantly, and as in the Ethiopian example, migration is often seen as a last resort. Individual migration breaks apart households, household migration breaks apart communities, and these fissures come with social cost. With a focus on an east Indian village, the division of family through migration to the city is perceived as a substantial social cost and undertaken only as a last resort in the face of drought (Julich 2011). Similar findings characterize flood-ravaged regions of Mozambique. Environmental degradation – in the form of flooding, extreme events, and soil erosion – has already displaced thousands although migration is not typically seen as coping strategy, but rather, as failure (Stal 2011). In China's Mekong Delta, despite being fearful of river bank collapse, households prefer to stay and eek out a living through fishing and plant collection. Established social networks and local ancestral connections represent strong connections to place (Dun 2011). Even on Pacific Islands atolls, characterized by extreme vulnerability to sea-level rise, many residents want to stay (Mortreux and Barnett 2009).

Historical Analogs

History provides myriad examples of connections between human migration and environmental context (e.g., McLeman and Hunter 2010). Historical demographers have tapped into these to put current social-ecological processes within a broader historical context. As noted by Gutmann and Field (2010: 3) and with a focus on the U.S. setting, "the environment has both impeded and assisted forces of migration … for centuries." They draw on examples of hurricanes, earthquakes, and the Dust Bowl to illustrate their argument. The San Francisco earthquake and subsequent fire of 1906, for example, destroyed half the city's housing stock and resulted in the evacuation of 300,000 residents. Nearly one-quarter of these evacuees never returned. Making use of historical data from city directories, Haas et al. (1977) reveal socioeconomic patterns in disaster-related migration and return. Not unlike differences in resilience to contemporary climate change, San Francisco's higher socioeconomic class districts and individuals stabilized fairly quickly after the earthquake, although unskilled workers were still in transition 5 years after the disaster (Gutmann and Field 2010).

Clearly, archival documents provide a rich data source for historical migration-environment research, but historical quantitative data can also be found. Again focusing on the Great Plains, and making use of a rich county-level data set, Gutmann et al. (2005) use pooled time series models to explore the association between population dynamics and environmental characteristics, 1930–1990. Climate effects on migration were revealed, working through agricultural impacts, especially during the 1930s–1940s. Outmigration from Great Plains counties was greatest from areas of high unemployment and high levels of agricultural employment, thereby also revealing the importance of economic factors in shaping migration trends (Gutmann et al. 2005). Of course, this historical period was associated with relatively greater vulnerability to environmental extremes given lower levels of technological adaptation that might reduce the impact of environmental disasters (i.e. drought) on crop failures. Yet these characteristics may reflect the realities within many rural settings of less developed regions today.

Gilbert and McLeman (2010) also tap into the potential for lessons from history, with a focus on rural Alberta in the 1930s. They take a qualitative

approach, weaving together an historical analog based on data from 37 in-depth interviews long-time residents of several rural communities who were willing to recall the experiences of their families and communities during the 1930s. Resident recounts suggest the decade saw repeated crop failures due to extreme summer heat and low rainfall. Combined with an economic recession, falling commodity prices, and rising unemployment, migration was seen as an adaptive response to livelihood stress.

Learning from Natural Disasters

Another pathway to garner insight into the migration-environment connection is through research in the context of rapid onset natural disasters. Although distinct from chronic and long-term environmental pressure, certainly such events provide windows into household strategies in the face of environmental strain. To this end, a substantial body of migration research has emerged from the U.S. Gulf Coast's experience with Hurricane Katrina.

Hurricane Katrina devastated the U.S. Gulf Coast in late summer 2005, causing nearly 2000 deaths and the evacuation of thousands, including residents of the major metropolitan area of New Orleans. A pilot survey undertaken approximately 1 year after the storm found that patterns of return migration exacerbated existing inequalities since more advantaged residents were far more likely to return (Sastry 2009). Subsequent analyses have led to similar conclusions. As compared to the 2000 census, New Orleans post-storm has become relatively more white, older, more educated, less poor and with fewer renters (Frey et al. 2007; Groen and Polvika 2010; Stringfield 2010). Some of the inequalities in return migration are related to prior residential segregation. Blacks tended to live in areas that experienced greater flooding and hence suffered more severe housing damage which in turn, led to their delayed return to New Orleans (Fussell et al. 2010).

Related, the social costs of displacement are not borne evenly. Those most vulnerable – with lower levels of homeownership, health care, employment ties – experience most difficulties during displacement and more severe challenges when trying to return (Hori and Schafter 2010).

Empirical Simulations

Also related to the environment as a migration "push" factor, several recently published works have undertaken empirical simulation of migration as related to projected environmental scenarios.

As an example, combining demographic, economic and climate projections, Barbieri and colleagues explore the demographic implications of environmental shifts in Brazil's highly populated northeastern region. Brazil's northeast contains nearly 30% of the nation's population due to historically high fertility levels, while the region is also experiencing high levels of urbanization and accompanying challenges in the large-scale provision of clean water and sewage. Projections suggest that climate change will severely impact the local agricultural sector, fueling migration and likely exacerbating urban challenges (Barbieri et al. 2010).

Grounding their simulation in a state-level empirical model of Mexico-US migration, Feng and colleagues (2010) project emigration based on future scenarios of agricultural productivity. By linking temperature and precipitation trends to corn and wheat, the researchers estimate that a 10% reduction in crop yields would push an additional 2% of the Mexican population to emigrate (Feng et al. 2010). With a similar focus, but using a two-region overlapping generations model, Marchiori and Schumacher (2011) predict an increase in international migration as climate change impacts productivity in the south. Their calibration exercise suggests that "the number of migrants increases by a factor of four if climate change reduces southern productivity by approximately 5 percent." (2011: 598)

Curtis and Schneider's U.S.-based research demonstrates the utility of, and need for, small-area population projections linked with

environmental data. Bringing together climate projections with population distribution data for the continental U.S., Curtis and Schneider (2011) estimate that 20 million residents will be affected by sea-level rise by 2030. Further, they argue the impact of sea-level rise extends far beyond the directly effected counties due to the ripple effects of migration networks that link inland and coastal areas. In this way, the projected scale of population redistribution potentially arising from climate change has important implications for destination areas' public infrastructures.

And finally, an interesting contribution by Reuveny and Moore (2009) uses directed-dyad-year units as observations, reflecting migration flows from one country to another in a particular year. Their time series models integrate standard economic, social, and political factors predicting migration, in addition to measures of arable land, crop land, natural disasters and population-related natural resource pressure. They find that environmental decline promotes out-migration from affected countries, net of the other included factors (Reuveny and Moore 2009).

Migration's Reciprocal Effect on the Environment

Thus far we've primarily explored environmental factors acting upon migration. Yet, environmental conditions, and change, may act as both cause *and consequence* of migration (Hugo 1996; NRC 1999). Further, migration yields these environmental consequences in both origin and destination areas.

Origin Impacts

The environmental impacts of migration at the area of origin are closely connected to remittances (Davis and Lopez-Carr 2010). An emerging literature explores two primary pathways. On the one hand, out-migration and remittances sometimes lead to a reduction in environmental pressure through agricultural de-intensification and land abandonment as a result of a decline in available labor force and the simultaneous increase in cash income through remittances (Qin 2010; Rudel et al. 2005; Zimmerer 1993; Reichert 1981). From a conservationist perspective, land abandonment might be seen as a positive environmental outcome since it could lead to environmental recovery including vegetation cover increase (Olsson et al. 2005; Rudel et al. 2005). As illustration, in the Bolivian Andes, out-migration brought about a decrease in cattle which, in turn, reduced grazing pressure and led to the native shrubland expansion (Preston et al. 1997). Other countries such as Albania (Muller and Sikor 2006) and Mexico (Lopez et al. 2006) have also seen positive effects of out-migration on growth of secondary vegetation.

Still, not everyone evaluates land abandonment as environmentally benign. For example, Zimmerer (1993) observed that soil erosion in the Bolivian Andes worsened as peasants stopped farming their lands and migrated elsewhere to engage in off-farm employment, presumably due to irreversibly transformed lands (c.f. Qin 2010). Also Robson and Nayak (2010) voice their concern that land abandonment and associated regrowth of forest areas will lead to biodiversity decline since landscape variation provides diverse habitat. An additional challenge is that out-migration can negatively impact traditional forms of natural resource management due to declines in the human capital necessary to maintain functionality of community-based natural resource institutions (Robson and Nayak 2010).

On the other hand, in some locales, remittances yield agricultural intensification (Taylor et al. 2006; De Haas 2006). De Haas (2001) reports that, in arid regions of Morocco and Tunisia, migrant households intensified agricultural production through the purchase with remittance money of motor pumps for irrigation. Further, remittances have fueled farmland expansion and conversion of rainforest for cattle pasture in Guatemala (Taylor et al. 2006), as well as the intensification of agricultural production

through the hiring of additional farm-workers in Ecuador (Gray 2009). Increased use of fertilizers and pesticides has also been linked to remittances (Moran-Taylor and Taylor 2010; Gray 2009). In addition, remittances may indirectly encourage higher levels of agricultural production through shifts in consumption patterns likely to increase natural resource use (Davis and Lopez-Carr 2010), and potentially worsen residential trash and pollution problems (Qin 2010). Finally, migrants themselves might impact agricultural practices upon return through introduction of "new techniques or cropping patterns as they can afford the risks and costs of such investments" (De Haas 2001: 30).

Non-agricultural effects have also been documented. An example comes from the farming provinces of Canar and Azuay, Ecuador, where remittances were invested in housing and land that converted the region into a peri-urban landscape of cultivated real estate (Jokisch 2002).

Destination Impacts

In-migration or immigration is frequently associated with localized population growth and attendant environmental impacts through, for example, land-use change, deforestation, desertification and soil erosion (Starrs and Wright 1995; Hugo 1996; Bilsborrow 1992). A number of studies have explored the detrimental impacts of migrants on tropical forests in the Amazon, Central and West Africa, and Southeast Asia (de Jong et al. 2006). However, the largest body of work in this arena focuses on deforestation at the Amazonian frontier. Here, migrant settlement has been equated with deforestation for a variety of reasons, including unclear property rights and/or tenure systems that incentivize forest clearing (e.g., Carr 2009; Alston et al. 2000).

However, as we know, context matters. In other settings, migrants do not appear to bring particularly negative environmental effects. As an example, focused on migrant/non-migrant fishing behavior in Indonesia, Cassels et al. (2005) observed no clear relationship between migration status and poor marine environmental quality via destructive fishing practices. In the U.S., a study of 200 urban counties identified no clear association between air pollution and immigrant concentration (Squalli 2009).[2]

Despite the lack of solid empirical evidence that migration disproportionately harms the environment, some critical voices have argued for drastic restriction of population movement. Cafaro and Staples (2009), argue that immigrants to the U.S. from less developed settings will substantially increase their consumption resulting in an increase in overall carbon footprint. In this way, they argue, immigration might spur climate change and should be restricted for environmental reasons. This aspect of the immigration debate received substantial popular attention several years ago when, in 2005, the Sierra Club was debating taking an organizational stand on immigration. In the end, the organization opted to not engage in a demographic dialogue.

Understudied Migration-Environment Topics

The consistent integration of environmental characteristics within migration research is likely still a long-way off. Yet concerns with contemporary climate change have certainly lent a wake-up call to migration scholars with regard to the potential importance of context. Following are four topical areas where migration researchers could offer insight of theoretical importance, as well as of use to contemporary policy and program response in the face of environmental change.

[2] Squalli (2009) made use of a framework of relevance in considering the migration-environment association. STIRPAT represents an extension of the more commonly known IPAT equation (Environmental Impact = Population * Affluence * Technology). The expansion, Stochastic Impacts by Regression on Population, Affluence, and Technology allows for elasticities within the decomposition exercise (Dietz and Rosa 1994).

Short vs. Long Distance Moves in Response to Climate Change

Public and policy debate continues as to whether environmental change will be associated predominantly with internal population displacement or also cause substantial international migration. However, most migration scholars agree that the majority of climate-related migration will be internal and of shorter distance. For example, in a meta-analysis of 16 case studies from the African continent, Jonsson (2010) finds it very unlikely that individuals affected by environmental change will migrate to the global North or even across the border into a neighboring country. Rather, most of the observed movements were within countries and often of relatively short distance. Similarly Zaman (1991) found that individuals displaced by erosion in the Bangladesh floodplains relocated only a short distance. And short-distance circular migration almost doubled while international migration to France almost halved during a drought in Mali (Findley 1994). Finally, a household study in Nepal observed that environmental degradation was associated with elevated rates of local but not with interregional or international population mobility (Massey et al. 2010).

There are several reasons for this pattern. First, long-distance and international migration require financial, human and social capital that the most vulnerable, impoverished rural households simply do not typically have. Second, and as discussed briefly above, connections to place run strong – even in vulnerable locales such as regularly-flooded delta regions in China and Mozambique, as well as Pacific Island atolls dangerously exposed to sea level rise.

Despite these findings, a number of scholars emphasize the possibility of substantial international exoduses in response to environmental change. Hugo (1996) was among the first to outline various reasons for anticipating international moves such as (1) distinctions in economic, political, and social conditions between countries of the global north and south, (2) an international immigration industry that has developed over the last decades, increasing inter-country migrations, and (3) globalization as a connecting force for people, industries and institutions.

Bardsley and Hugo (2010) use Thailand as a case in point to illustrate how political and institutional structures might facilitate international migration in the face of environmental shifts. Strong networks maintained between Thailand and other countries have established active migration corridors through which environmentally-induced migration might intensify (Bardsley and Hugo 2010). The existence of similar migration corridors have been reported for the Pacific island nations as agreeable political relationships between island states and former colonial powers (e.g. Marshal Islands or Samoa and the U.S.) facilitate international population movement (Opeskin and MacDermott 2009). Pacific Islander migrant streams to New Zealand have also been identified (Shen and Gemenne 2011).

Rural-Urban Linkages

Urbanization is arguably among the most important demographic phenomenon of the last century. There are currently 21 "megacities" with over ten million residents. And while a higher proportion of residents in more developed nations live in urban areas (74%), urbanization is occurring more rapidly in less developed settings. It is expected that 70% of the world population will be urban by 2050 (PRB 2011).

With rapidly growing, massive urban agglomerations come negative externalities such as high rates of unemployment, infrastructure strain, and environmental degradation (Bencivenga and Smith 1997; Beauchemin and Schoumaker 2005; Yin et al. 2011; Kavzoglu 2008). For example, Yin et al. (2011) conducted a longitudinal study in the Shanghai metropolitan area during the transitional economy period of 1979–2009. Using satellite images they found that massive urbanization led to clearing of vegetation and a wide range of environmental degradation. Moreover, for the international context

Mostafa (2010) demonstrated that per capita ecological footprints were positively associated with the level of urbanization across 140 nations.

There exists an important, but understudied, link between rural environmental degradation and urban growth (Adamo 2010; Fearnside 2008). More often, research designs and resulting conclusions end at examination of migration's 'push,' not querying destinations or the implications of destination choices. An exception is Sanderson (2009), who observed that environmental degradation through mining activities caused substantial out-migration from rural to urban areas in Ghana. Part of the urban 'pull' is related to public services, which draw rural to urban migrants (Beauchemin and Schoumaker 2005) – even households from deep Amazonian villages are drawn to the educational opportunities in peri-urban Brazilian destinations (Parry et al. 2010).

Of course, urban concentrations bring economies of scale for service delivery which may yield relative environmental gain, while also acting as a relief valve, of sorts, for rural demographic pressure. Indeed, rural-to-urban migration has been found to cut the magnitude of rural population pressure on deforestation rates (Ehrhardt-Martinez et al. 2002; Jorgenson and Burns 2007), and therefore perhaps allow development of secondary forest cover (Wright and Muller-Landau 2006).

Urban-to-rural population flows are also possible and the resulting "rural encroachment" can yield detrimental environmental effects within non-urban destinations (Burns et al. 1994: 225). Out-migrants from urban areas tend to be relatively poor, unskilled and have low levels of education and might prioritize short-term survival and economic gains over long term perspectives leading to unsustainable natural resource extraction (Burns et al. 1994, 2003). In more developed countries the process of urban-to-rural migration has been called "counter-urbanization" and is more often associated with amenity migration to environmentally attractive locales (Hunter et al. 2005; Jackson et al. 2008).

Migration, Health and the Environment

A large body of literature examines the connection between migration and health – both as related to migrants themselves, migrant households at destinations, and as related to household members left behind. The "immigrant paradox" is particularly intriguing – research finds that despite typically being of lower socioeconomic status, immigrants to the U.S. tend to have superior health outcomes (e.g., Markides and Eschbach 2011). An open question is how this paradox may be associated with environmental settings. Yabiku et al. (2009) explored this, making use of long-term socioecological data in Phoenix, Arizona to demonstrate that environmental conditions help explain immigrant's health *disadvantages*, but not advantages. In other words, the effect of neighborhood amenities becomes increasingly beneficial for a respondent's health, the longer he/she has lived in the particular neighborhood. A related study links neighborhood stability, the built environment and vulnerability to heat extremes, indeed finding that communities characterized by greater socioeconomic disadvantage and less stable populations experienced relatively more heat distress (Uejio et al. 2011).

Also bringing health into the equation, extreme environmental conditions such as particularly high (e.g. Sub-Saharan Africa) or low (e.g. Alaska) temperatures or elevated levels of humidity (Amazonia) might impact the health of newly arrived migrants differently than the health of already adapted long-term residents. Vigotti et al. (2006) found for Italy that the heat-related mortality risk for migrants differed according to their birthplace. Migrants from northern areas of the country who had moved to the south had a higher risk of dying from heat-related causes than migrants from other southern areas or native-born residents. Related, migration-related shifts in land use may alter the local environment in ways that impact health. Consider migrant colonization, deforestation and increased malaria risk within the Brazilian Amazon (de Castro et al. 2006).

Further, a process of negative health-selective migration among middle-aged cohorts of Australian women has been observed (Larson et al. 2004). Within this group, those with long-term, chronic diseases and overall poor health were actually characterized by higher levels of mobility. The authors suggest that migration might be triggered by a search for services and physical amenities, possibly leading to a reduction in aggregate level of health at amenity-rich destination areas.

Finally, perceived or real threats to health and well-being based on negative environmental characteristics (e.g. air-pollution, radiation, toxicity) might impact population mobility. However, empirical support for this hypothesis has yet to be found. In contrast, a number of studies conducted in the U.S. find that environmental pollution is not clearly associated with greater levels of outmigration (Crowder and Downey 2010; Squalli 2009; Hunter 1998), although areas with environmental risks gain relatively fewer new residents (Hunter 1998).

Social Inequalities in the Migration-Environment Association

Socioeconomically disadvantaged groups have been found to be disproportionally affected by environmental risks (for an overview, see Brulle and Pellow 2006). Yet few studies have examined the ways in which such social inequalities in environmental exposures may be, in part, related to differences in migratory behavior. Two theoretical perspectives are useful here. First, the income-inequality and spatial assimilation perspectives (Crowder and South 2005) suggest that racial differences in the likelihood of moving into and out of environmentally hazardous neighborhoods emerges largely as a function of differences in socioeconomic status. Advantaged households may be able to avoid high polluted neighborhoods whereas disadvantaged households have limited mobility opportunities. On the other hand, the residential discrimination thesis (Godsil 1991; Bryant and Mohai 1992) suggests that differences in exposure to environmental hazards and differences in mobility patterns are due to housing-market discrimination that restrict housing options available to disadvantaged groups.

A handful of studies have explored the race/ethnicity, environment and migration relationship. For example, Hunter et al.'s (2003) work models differences in out-migration behavior between racial groups in relation to the presence of hazardous waste facilities, superfund sites, and annual toxic release levels, finding no racial differences in outmigration as related to environmental hazards. However, a recent study by Crowder and Downey (2010) found that racial minority groups *enter* hazardous areas more frequently than whites.

Beyond race/ethnicity, there are also gender dimensions to the migration-environment association (Hunter and David 2011). Clearly migration, as a social process, is inherently gendered and gender-influenced cultural expectations, policies, and institutions shape migration processes as well as individual interaction with local environments (e.g. Dannecker 2009). As examples, in some cultural settings, women tend to predominantly engage in livelihood migration (e.g. the Philippines; McKay 2005), while in others the "push" of environmental decline might be felt more by men (e.g., West Africa; Terry 2009). Yet virtually no scholarship brings this dynamic to the fore (Lori and David 2011) with the notable exception of Gray (2010). His findings reveal gender distinctions in migration in the face of environmental pressures in the Ecuadorian Amazon. Specifically, young women tend to move further than men, who are more likely to engage in seasonal migration then return to their rural homesteads to tend farms (Gray 2010).

Central Methodologies in Migration-Environment Research

A wide variety of methodologies have been applied to the migration-environment question

(Piguet 2010). Here, we briefly review four currently used, promising approaches.

Time Series

The environmental effects of population dynamics logically require time to become measurably manifest (Sanderson 2009; Entwisle 2007). For example, it may take years before deforestation leads to a level of soil deterioration that adversely impacts subsistence agriculture. Thus, longitudinal time-series data are especially appropriate for population-environment connections (Cassels et al. 2005). A useful example is provided by Henry et al. (2004) who employed event history hazard models to investigate the impact of droughts on out-migration in Burkina Faso. They demonstrated that a time window (or lag) of 3 years was most appropriate since "rural households may have sufficient stocks of cereals or enough money, livestock and assets to purchase cereals following a poor harvest" but are likely to have depleted their assets after two or three consecutive bad harvests, "a situation that could force them into migration" (Henry et al. 2004: 438). Following this approach, studies by Massey et al. (2010) and Reuveny and Moore (2009) have used time series to model migration-environment connections.

Multilevel Modeling

Multilevel models use mathematical algorithms that allow simultaneous inclusion of individual and aggregate variables (Luke 2004). This approach is being increasingly used in migration-environment scholarship (e.g. Nawrotzki et al. 2014). An example is Yabiku et al. (2009) investigation of the impact of environmental factors on differential health outcomes between migrants and non-migrants. Here, household survey data were merged with local neighborhood characteristics related to traffic, heat, amenities such as parks and trees, and disorder such as trash, noise, crowding, and waste sites. Although multilevel modeling approaches have many advantages, a central drawback is the necessitation of a predefined hierarchy of spatial units (e.g. census tract) that might not appropriately reflect the spatial distribution of the phenomenon under study (Leyk et al. 2012; Piguet 2010).

Agent-Based Modeling

Agent-based models (ABM) have also been promoted as useful tools for examining population-environment interactions (Auchincloss and Diez Roux 2008; Evans and Kelly 2008). An ABM simulates human behavior and allows hypothetical individuals to interact with the environment in complex ways including environmentally-motivated migratory behavior (e.g. Mena et al. 2011). A key strength is the usefulness of this approach for the study of feedback, adaptation, and nonlinear relationships between coupled natural-human systems (O'Sullivan 2008). In addition, the prediction of human behavior is useful within the study of policy interventions (Miller et al. 2010). As an application example, Mena et al. (2011) developed an agent-based model to simulate environmental change (e.g. deforestation) associated with land use patterns of frontier migrant farmers in the Northern Ecuadorian Amazon. They combined socio-demographic and socio-economic data from a household survey with longitudinal satellite images of land cover and ultimately created spatially-explicit representation of land use/land cover for the region.

Qualitative Ethnographic Methods

This category is home to a substantial number of recent studies connecting environment and migration (e.g., Carr 2005; Gibbons and Nicholls 2006; Jonsson 2010), several undertaken within the larger EACH-FOR project (Environmental Change and Forced Migration Scenarios). EACH-FOR, co-financed by the European Commission, produced 23 case studies representing a wide variety regions across the world and was

able to illustrate multiple ways through which environmental change acts as a migration trigger (Jaeger et al. 2009). Several of the examples offered within this review are products of the EACH-FOR collection including insights from Ghana (van der Geest 2011), Hispaniola Island (Alscher 2011), and Tuvalu (Shen and Gemenne 2011).

Indeed, much can be learned from qualitative studies about reasons underlying migration decision-making. As an example, Carr (2005) used participant observation, unstructured interviews, and small scale surveys in three villages in coastal Ghana to investigate the complex connection between environment, economy, and migration. Ecological degradation threatened men's power position in the household, which Carr identified as the underlying push factor for the movement to areas with better opportunities for cash income.

Subjectivity as a Methodological Challenge

Environmental challenges are relative, thereby hampering cross-setting analyses. For example Meze-Hausken (2000: 389) points out that Irish and Ethiopian farmers would likely have very differing perceptions of drought and, in fact, even objective measurements of rainfall take different meaning within their daily lives. In fact, *subjective* perceptions of local environmental conditions can actually be stronger predictors of migration than objective measures (Massey et al. 2010). Thus, an important measurement challengeis accurately reflecting local environmental context in ways meaningful to residents and likely to manifest within migration decision-making processes.

Science-Policy Disconnects and Recommendations

Environmentally-induced migration continues to receive popular and media attention. Yet the image portrayed is often not informed by scientific understanding and, in some cases, actually contradicts current scientific knowledge.

Some studies have associated environmental migration with violent conflicts (Reuveny 2007) and threats to national security in general (Scheffran and Battaglini 2011). Yet the bulk of research suggests environmentally-related livelihood migration is far more likely to entail internal, short-distance moves as opposed to costly, and more controversial, international migrations. In addition, research across a variety of settings demonstrates that migration is not a decision taken lightly. The separation of individuals from households, or in the aggregate, the disintegration of entire communities, can entail substantial social cost. Although migration has historically been used as a coping strategy, it is sometimes seen as a "last resort." Given these understandings, programmatic and policy response should focus within borders, aiming to reduce livelihood vulnerability, and allowing families and communities to remain intact. Such efforts may go a long way toward stemming environmentally-induced migration.

In addition, dialogue tends to ignore differential vulnerability across, and within households, rather assuming with broad-brushed strokes equivalent response across actors. On the contrary, research from natural disasters and other bodies of work clearly demonstrates that households vary in their ability to respond to environmental change, either through migration or otherwise. Further, within households, men and women differentially experience the linkages between migration propensity and environmental conditions and change. Even so, such nuance tends to be lost within public and policy dialogue.

Indeed, politically, there has been virtually no dialogue about migration, even in broad-brush terms, within climate change negotiations. The United Nations Climate Change Conference in Durban 2011 achieved success in the creation of a Green Climate Fund to support adaptation in developing countries, particularly those most vulnerable to the adverse effects of climate change. It remains to be seen if this brings

support targeted to impact household-level vulnerability as related to migration.

Of course, political recognition of migration-environment linkages would be a logical first step, however, environmentally-induced migration tends to be invisible under legal frameworks (Johnson 2009). A first step was recently taken as the United Nations High Commissioner of Refugees (UNHCR) acknowledged in a recent policy document that "some movements likely to be promoted by climate change could indeed fall within the traditional refugee law framework, bringing them within the ambit of international or regional refugee instruments, or complementary forms of protection, as well as within UNHCR's mandate" (UNHCR 2009: 6). Even so, such frameworks neglect consideration of internal population movements and, as discussed at the chapter's onset, the term "refugee" itself can yield political complications.

Conclusion

As we seek more depth in our understanding of migration's causes and consequences, the migration-environment association becomes all the more clear. Much progress has been made over the past several years although certainly important work is ahead.

Fortunately, the migration-environment research community continues to move beyond Malthusian arguments focused on population pressures as the force underlying environmental change and unsustainable natural resource use. The political, economic, and cultural contexts of population-environment connections have lent better critical understanding of the roles, for example, of globalization, inequality, and vulnerability in household migration decision-making.

Clearly migration-environment questions are inherently interdisciplinary. Although much work in this area has engaged scholars across disciplines, we must continue to expand these efforts. Natural science expertise is essential in accurately engaging the environmental data and the demographic community must continue to seek those interested in such collaborative work. Our challenge as migration scholars is to shed light on migration as a social process and, where that process is shaped by environmental forces, neglect of these factors means we've not done our job. In today's era of global climate change, and particularly in regions where natural capital is central to livelihoods, it's imperative that we measure and integrate consideration of the environment's interaction with other factors in shaping migration – otherwise, our work on the migration puzzle may simply be missing a critical piece.

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Population Distribution and Poverty

22

Rachel E. Dwyer and Daniel Sanchez

Poverty influences population distribution through a range of mechanisms. The hope of finding a better life is a primary push factor in migration, spurring great movements of poor people within and across national borders in the past and today. Poverty can also impede mobility, however, as scarce resources and institutional barriers limit the ability to move. Persistent, intergenerational poverty is often rooted in particular locations. These places can become poverty traps that are difficult to exit for the people living in them and difficult to improve for policymakers and activists trying to change the places from the outside. These poverty traps then influence population distribution patterns around them as advantaged populations, developers, and investors avoid the poorest places.

Given these associations between poverty and place, it is unsurprising that poverty policies very often include measures that are intended to influence population distribution. The goals are typically justified as a combination of poverty amelioration or social control, though there is wide variation in the relative weight of these objectives. The means of achieving these efforts typically lean in one of two directions, which Loïc Wacquant has characterized as policies of 'dispersal or containment" (2008a, b: 117). Each can be seen as a measure of poverty reduction or social control, but dispersal policies tend towards justifications of reducing poverty by integrating the poor with more advantaged populations, while containment policies tend towards justifications of controlling poor populations and limiting spillover negative effects for more advantaged groups. In both cases, the interests of powerful actors in land use and population distribution shape the construction and implementation of the policies.

In this essay we review recent research on poverty and population distribution. We start with a brief discussion of the range of approaches to measuring poverty in this literature, a diversity arising in part by the wide variety of countries and social contexts that are studied. We divide our major substantive review into two sections covering first rural and then urban poverty, but also discuss interdependencies between rural and urban poverty distributions. We then elaborate on the crucial role of population distribution in poverty policies and focus especially on the controversial history and utility of interventions aimed at deconcentrating poverty, like the Moving to Opportunity (MTO) initiatives in the United States. At the end we highlight emerging research agendas in the field and point to what we think will be particularly promising areas for future research. We discuss these issues internationally across regions of the globe, but also develop a special focus on the United States, where issues of poverty and population

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_22

distribution have become especially important in recent decades. We argue throughout that *where* the poor are located is crucially important to understanding the experience of poverty and that the possibilities for social mobility out of poverty are tied to the capacities for spatial mobility among poor populations.

Measuring Poverty and Population Distribution

All studies of poverty must grapple in one way or another with the question of how to conceptualize and measure poverty, and the issues may be even more challenging in research on the spatial distribution of the poor, where the measures must be comparable across geographic units. The choice of poverty measure can have significant consequences for estimates of where the poor are located and historical trends in different locations. The measurement issues are also fundamentally wrapped up with conceptual issues in theorizing poverty and different measures are suited for different questions about the population distribution of the poor.

A contrast is often drawn between absolute and relative measures of poverty, where absolute measures attempt to identify a line below which basic subsistence is impossible, whereas relative measures define poverty as inevitably social and comparative. Studies of developing countries often employ measures like the number of people living with resources below $1 or $2 a day, based on purchasing power indices that try to compare the circumstances of the very poor across countries with different currencies and price structures (Ravallion et al. 1991; Ackland et al. 2006; Banerjee and Duflo 2007; Chen and Ravallion 2001). Some studies adjust for differences in the cost of living between rural and urban areas—differences which can be quite significant for the living standards of the poor—though data to adequately capture these differences are often unavailable (Nord 2000; Weber et al. 2005; Chen and Ravallion 2007; Ravallion et al. 2007). Relative measures are more common in studies of developed countries, where basic subsistence is more likely achieved, and the goal is to identify those resources fall far below the resources available to an average family in a community (Anand and Sen 1997; Brady 2003; Silver and Miller 2003). Spatial isolation figures large in theories of relative poverty because spatial distance reinforces and deepens the resource deprivation with geographic barriers to opportunity and services (Wilson 1987; Whalen et al. 2002).

Poverty measures also differ in how resource deprivation is defined. The most common poverty measures are based on either income or consumption, adjusted for purchasing power and cost of living differentials, and usually derived from household survey data, which poses considerable comparability problems in cross-national research. Some measures are based on a head-count of the number of poor people below a certain level of resources, while income gap or poverty gap measures capture the depth of poverty, and interval and ordinal measures summarize both the quantity and depth of poverty in a given place (Brady 2003). Measures of the depth of poverty identify how many of the poor are significantly below a designated poverty line, and thereby capture some elements of the level of inequality as well as the level of poverty in a society. Each of these measures captures important features of poverty and which is most appropriate depends on the research question.

Measures based on income and consumption only describe monetary deprivations, however, even though the poor may in fact be deprived along multiple dimensions including nonmonetary needs. Newer measures of "social exclusion" include multiple indicators of material deprivation and go beyond income and consumption to include other conditions of poverty like access to housing and other basic subsistence needs, availability of government services and transfers, exposure to crime, and neighborhood conditions (Silver and Miller 2003; Stewart 2003; Iceland and Bauman 2007). A growing body of research looks at assets and access to credit as a dimension of social disadvantage (Shapiro and Oliver 2001). Asset poverty

compounds income poverty and those without even a small savings cushion are particularly vulnerable (Shapiro and Oliver 2001; Kamanou and Morduch 2002; Fisher and Weber 2004). Access to even small amounts of credit may be crucial to developing assets and moving out of poverty, and successes like the Grameen bank suggest this can be a key poverty-reducing remedy, though critics argue economic development is a more effective strategy (Amin et al. 2003; Karnani 2007). Many of these factors of non-monetary hardship are linked to the distribution of poverty as the local environment determines access to basic subsistence needs and social services (Iceland 2003b; Newman and Massengill 2006). Social exclusion approaches in some sense therefore attempt to incorporate deprivations that arise from geographic location into the conceptualization and measurement of poverty.

Measures of the spatial distribution of the poor bring the geographic dimension even more directly into poverty measurement. Quite often a simple comparison of poverty rates across countries or regions within countries will suffice to highlight stark differences between places. More sophisticated measures are useful for comparing regions within countries, including concentration and segregation measures. Concentration measures capture the likelihood that poor people live in highly disadvantaged settings, like the proportion of poor people who live in neighborhoods that have poverty rates higher than 40 % in a city or cities (Jargowsky 2003). A wide range of segregation measures identify how spread out or isolated the poor are within a geographic unit like a city or a region (for excellent reviews of these, see White 1983; Massey and Denton 1988; Fischer et al. 2004; Reardon and O'Sullivan 2004; Musterd 2005). Massey and Denton (1988) argue that these measures capture five dimensions of segregation: evenness, exposure, land concentration, centralization, and clustering. This diversity of approaches enables analysts to choose the measure that best suits their research question. Recent methodological innovations permit decomposition of segregation between multiple groups and across multiple spatial scales (Lee et al. 2008; Parisi et al. 2011; Fischer 2003). These more sophisticated measures have been used less for understanding poverty distribution than for studying the distribution of racial and ethnic minorities, but extending this understanding, including cross-nationally, would be a very fruitful direction for future research.

Scholars are interested in the causes and consequences of poverty segregation because of expectations that the experience of poverty and the chances for social mobility are worse when poor families are confined to undesirable areas with few resources. The disadvantages in these communities arise partly out of the stark demographic reality of living in a place where most everyone is poor. When poor populations are concentrated together, the disadvantages of being poor individually become compounded by the disadvantages of knowing only poor people and a communal poverty accentuates the individual experience of poverty as there are few collective resources that can be mobilized to improve conditions (Small and Newman 2001). These concerns have led to a burgeoning body of research on local place effects on poverty and the health and well-being of poor populations, where the spatial distribution of the poor is analyzed as a potentially causal mechanism for persistent poverty (Sampson et al. 2002).

The tendency of poverty to be spatially clustered also poses methodological challenges for studies of the effects of the spatial context on poverty. In this case, poverty distribution can be a complicating factor in analyses of the effects of the characteristics of local places for the people who live in them. Spatial correlation between poor places means that poverty may not be independent across geographic units (neighborhoods or counties for example), which will bias estimates of effects of contextual variables on poverty outcomes (Weber et al. 2005). Spatial regression techniques have been developed to correct for spatial correlation and improve the calculation of neighborhood effects on poor families. These methods could also be used to investigate substantive questions about whether poverty clustering

matters for outcomes—for example studies of whether poor people living in neighborhoods near other poor neighborhoods are worse off than poor living in an area among more affluent neighborhoods—though again most applications like this have focused on racial and ethnic concentrations rather than poverty per se (Crowder and South 2008). This is another promising direction for expanding the understanding of the role of spatial scale in poverty distribution.

Geographic concentrations of poverty occur worldwide and across rural and urban settings, though countries differ in the relative mix of poor areas depending on the history of economic development, migration, and poverty policies. Because of this, research on poverty distribution is often divided between studies of rural versus urban poverty, even if these distinctions are sometimes less sharp in empirical reality than they can appear conceptually (Gans 2009).

Rural Poverty

The majority of the world's poor live in rural areas, with recent estimates ranging from about two-thirds to three-quarters of the total poor population located in rural places (Ravallion 2002; World Bank 2007: 45). Estimates vary due to differences in poverty measurement and definitions of rural and urban between countries and data sources, but it is clear that despite rapid urbanization in many countries, the average poor person still lives in a rural area at the beginning of the twenty first century. Absolute levels of poverty are higher in rural places than in urban areas and a greater percentage of the population is poor in rural areas. One recent estimate finds that 70 % of the rural population in 87 developing countries lived below $2 a day 2002, whereas less than 35 % of the urban population was poor in the same set of countries (Ravallion et al. 2007). The poorest places in many developed countries are also in rural areas, and the more remote, the farther from metropolitan areas, and the less populated a region, typically the poorer it is (Weber et al. 2005). Rural poverty is often the most isolating form of concentrated poverty because rural poor are not only secluded within their immediate community, but rural communities may be very far from places with more affluent populations and economic opportunities. The double isolation of rural places means that some of the most persistent pockets of poverty in the world that have remained that way for many generations are in rural areas, like the Appalachian and Mississippi Delta regions in the United States, wide areas of the Amazonian basin and Sub-Saharan Africa, and rural places in South Asia.

The origins of rural poverty are diverse, but in most cases involve some combination of economic underdevelopment or decline and government neglect. Most rural poor live in the developing world under the legacy of peasant and colonial agricultural systems and incomplete transitions to industrialization (World Bank 2007, 2008a). Many poor rural areas struggle to be economically viable in the increasingly globalized food and commodity production systems (World Bank 2007, 2008b, 2009). A number of developing countries including China and India perhaps most markedly have experienced rapid urban growth and development, with rural poverty still entrenched in less developed regions (World Bank 2009; Liang and Song, Chap. 14, this volume). Some areas were once highly productive, but have declined as mechanization or global competition has eaten away at opportunities for local residents. Others have long struggled on relatively marginal land that has only become less likely to support families and communities with advancing ecological damage, as in the American Great Plains or land near the African Sahara desert (Lobao and Meyer 2001). Since most rural poor are involved with farming, they must also cope with the cyclical and risky nature of farming that makes it difficult to accrue assets and develop a steady path towards upward mobility given that savings accumulated in a good year can be quickly decimated by bad years to follow (World Bank 2007).

Some of the most persistently poor rural places started as government-mandated settlements of marginalized people. Indigenous

populations were often forcibly resettled to rural areas by colonial powers, and many of those places still survive, with high levels of poverty and a host of accompanying social problems (Sandefur et al. 1996). Indigenous populations are still much more likely to live in rural areas than urban areas even in developed countries for example in Native American reservations in the United States and Aboriginal reserves in Canada and Australia (Gundersen 2008; Carino 2009). In other places, indigenous populations struggle to maintain traditional livelihoods on land that is desired by other groups and threatened by the pressures of globalization and climate change (Carino 2009). Humanitarian movements and policy innovations within world government organizations have developed some measures to protect and support indigenous groups, but resources are stretched thin, and misunderstandings between indigenous populations and local government agents can impede progress. The goals of economic mobility and development can also come into conflict with desires to preserve culture and land (Duffy and Stubben 1998). Similar dynamics occur across a range of racial/ethnic divides worldwide, where subordinated ethnic groups are concentrated in poverty-stricken rural areas. In many cases, this is a version of indigenous segregation on a very large scale as in the South African "Bantustans" or "homelands" (though these include urban areas as well as rural places). Even in cases where the original removal and segregation occurred far in the past, the historical disadvantages linger, in part through continued discriminatory treatment by local and national governments. The association of race and place appears to be particularly potent in producing multi-generational poverty traps, a theme that we will pick up again when we talk about concentrated urban poverty.

Rural poor often seek a better life by migrating to places with more economic opportunities, especially to cities (see Wright and Ellis, Chap. 2, this volume for more on economic issues as a factor in migration). Rural to urban migration is therefore common among poor populations, especially in developing countries where there are still large rural populations (Ravallion et al. 2007). Migration can often be a successful mobility strategy for poor families, but it also comes with risks and the likelihood of ending up in highly poor areas within cities. (In the next section we discuss urban poverty concentrations at length.) Still, migration appears to reduce poverty for many of those who move, even accounting for the likelihood that migrants have qualities that make them more likely to succeed than those left behind (Sabates-Wheeler et al. 2008). Other studies of Sub-Saharan Africa indicate that even after controlling for known demographic correlates of under-5 mortality, the urban advantage can be reduced and in certain cases reversed (Bocquier et al. 2011). While there are clear linkages between geographic mobility and economic mobility, scholars have argued that access to services and economic opportunities are the mechanisms by which certain locational advantages can be attained from a rural to urban migration, particularly in developing nations (Martine et al. 2012).

Migration out of poor rural communities may be a route out of poverty for the people who leave, but it also has consequences for those left behind. Since migrants are often younger and more highly educated than non-migrants, their departure can significantly affect the demographics of a community (World Bank 2007). These consequences can be highly variable, however. If migrants maintain close ties with the sending community, they may send home remittances and provide other resources that improve the community and, when it occurs on a large enough scale, reduce rural poverty overall (Adams and Page 2005; Ravallion et al. 2007). Rural communities that are closer to urban areas may be more likely to benefit from sending migrants than communities that are more remote because distance affects the maintenance of social ties and the capacity to locate economic opportunities. The effects of outmigration also depend on whether the exit of the migrants lowers strain on community resources and thereby improves circumstances at home, or results in a youth and talent drain that leaves the community worse off (World Bank 2007).

While the primary migration route is from poor rural areas to large urban areas, rural-to-rural migration is also common, especially when migrants cross international borders. Migrants from a poor developing country frequently work as low-wage laborers in the agricultural system of a neighboring developed country, producing rural-to-rural migration. Latino immigrants to the US, for example, appear to be increasingly locating in rural America and small towns, where they are often segregated in concentrated pockets of poverty (Lichter and Johnson 2009; Lichter et al. 2010). Latino segregation appears to be particularly severe where there has been a history of black-white racial tension and segregation, linking newer spatial dynamics of immigration to older spatial dynamics associated with the long history of African-American exclusion in US spaces (Nord et al. 1995; Lichter et al. 2007, 2010). Lichter and colleagues observe that this developing form of "geographic balkanization" in America's rural regions reduces opportunities for the children of migrants, and reinforces a legacy of segregation for future generations. Most of the time, however, migrants leave rural areas for urban areas within their own country or across national borders, but they may find high levels of concentrated poverty in more urbanized areas as well.

Urban and Suburban Poverty

As the world population has urbanized over the last 100 years, so too has poverty become an increasingly urban phenomenon, with new challenges and opportunities for poverty reduction. The poor urbanized rapidly over the last century, often faster than other population groups, especially in developing countries where migration to cities is a route to economic mobility (Ravallion 2002). In an analysis of almost 90 developing countries in the 1990s and early 2000s, Ravallion et al. (2007) find that the urban share of the poor population increased and urban poverty rates grew apace even in recent decades. Ravallion and colleagues highlight significant regional variation in poverty urbanization, however, indicating varied associations between urbanization and poverty distribution (Ravallion and Chen 2007; Ravallion et al. 2007). Table 22.1 reports the variation between world regions in levels of poverty (according to head count measures) and urban shares of poverty. The places where the poor are most urbanized also have lower levels of extreme poverty. Among the poorest regions, the poor have urbanized most in Latin America and the Caribbean, where fully one-third of the poor have lived in urban areas since the 1990s, in part because the population as a whole is highly urbanized. Urban shares of poverty are also high in South Asia and Sub-Saharan Africa, especially given the lower overall levels of urbanization in those regions. Poverty is much less urbanized in East Asia, with especially low levels in China, where migration has been restricted and even for migrants, social rights for many are tied to rural home villages through the *hukou* system (Liang and Zhongdong 2004). The *hukou* system can make it difficult for Chinese who wish to migrate to access jobs, housing and social services in cities (Bao et al. 2011; Liang and Song, Chap. 14, this volume). In fact, in China the rural share of poverty has increased slightly over time, consistent with evidence that economic growth in the cities has far outpaced rural economic development, even though poverty has fallen in rural areas as well (Ravallion and Chen 2007). While rural to urban migration in China has attracted the attention of many scholars, others have noted that remittances from urban to rural areas have created a mutual dependence based upon familial ties (Cai 2003) Such informal social networks allow the urban affluent to act as a counterbalance to the impoverished rural areas in China by providing much needed economic and emotional assistance. A similar process has occurred in Eastern European countries where poverty has become more "ruralized" as urban areas saw disproportionate economic growth during the transition to a market economy (Gerry et al. 2008). The regions where poverty urbanized the most in the 1990s and early 2000s also saw the greatest

Table 22.1 Poverty by region

Region	Poverty headcount at $1.25 a day (PPP)[a] (%)	Poverty headcount at $2 a day (PPP)[a] (%)	Urban poverty headcount at $1.08 (PPP)[b] (%)	Rural poverty headcount at $1.08 (PPP)[b] (%)	Urban share of poor[b] (%)	Urban share of population[b] (%)
East Asia and Pacific	14.3	33.2	2.3	19.8	6.8	38.8
Europe and Central Asia	0.5	2.2	0.8	22.4	2.2	63.5
Latin America and Caribbean	6.5	12.4	9.5	21.1	33.4	76.2
Middle East and North Africa	2.7	13.9	0.8	3.8	59.0	55.7
South Asia	36.0	70.9	32.2	37.1	24.1	27.8
Sub-Saharan Africa	47.5	69.2	40.4	50.9	30.2	35.2

[a]Source: World Bank databank, 2008 data
[b]Source: Ravallion and Chen (2007), 2002 data, 1993 PPP

reductions in poverty overall (Ravallion et al. 2007). This is consistent with evidence that where urban migrations are pursued by the poor and allowed by governments, the poor may find a better life and even support those living back in rural areas.

Even if urban migration is a route out of poverty, migrants often end up in very poor areas within cities. In the developing world, poverty urbanization has resulted in massive slums, shanty-towns, and barrios, usually on the periphery of major developing megalopolises, though also in central cities, and these places can become poverty traps in their own right (Brockerhoff and Brennan 1998; Arimah 2010; He et al. 2010). Many of these developments are largely extra-legal, putting residents at the mercy of shady operators and outright criminal gangs who claim to provide order and protection, as well as leaving residents vulnerable to government clearance if "higher" uses of the land are determined. Squatter settlements also lack basic government services like sewage, electricity, durable housing, and clean water and operate almost entirely within the informal economy (Roberts 1992; Edelman and Mitra 2006). While poor families often devise ingenious solutions for managing under these conditions, the concentration of poverty with a range of material deprivations heightens social exclusion and reinforces inter-generational poverty (Roberts 1992). State context also influences opportunities for upward mobility. In China where rural migrants to cities have restricted rights in the *hukou* system, there is less upward mobility for rural migrants than migrants who originate from urban areas (Logan et al. 2010; Liang and Song, Chap. 14, this volume). Even in urban settlements where poor populations hold more formal rights to their residences, there are often significant gaps in basic services, educational opportunities, and economic aid (Edelman and Mitra 2006).

While slum development appears to accompany rapid urbanization in many developing countries, there is significant variation across

countries, suggesting that institutions and economic conditions also play a role in whether slums develop and how big they become (Edelman and Mitra 2006). For example, in many sub-Saharan countries like Botswana, Kenya, and Nigeria, over 60 % of the urban population lives in slums, whereas in North African countries like Tunisia and Egypt less than 40 % of the urban population lives in slums (Arimah 2010: 9). Many Latin American countries have lower incidences of urban concentration in slums as well, even including places like Brazil which have large well-known slums on the outskirts of big cities. Chinese migrants who move outside the *hukou* system also tend to settle in poor communities on the edge of cities (Liang and Song, Chap. 14, this volume). Chinese rural-to-urban migrants are also likely to be concentrated in worker dormitories, a type of poverty concentration that has received little attention but is likely widespread in less developed countries, especially those with growing manufacturing sectors (Liang and Song, Chap. 14, this volume). We also see the emergence of pockets of urban concentrated poverty in China which look more like urban poverty in developed countries in being heavily populated by unemployed and under employed groups (He et al. 2010). All of this points to the greater heterogeneity of the experience of poverty in less developed countries, much more diverse than the stereotyped image of "third world slum" (Montgomery and Hewett 2005). Economic conditions and housing policies that provide affordable housing for lower-income families appear to be particularly important for limiting slum development and reducing poverty (Ooi and Phua 2007; Arimah 2010).

In developed countries, poverty concentrations in urban areas are typically much more likely to fall under government oversight than in developing countries, but the relative deprivation and exclusion from mainstream institutions is often severe. While the poor in developed countries do not experience the same level of absolute poverty as in the developing world, the resource demands for ordinary participation in society are much higher and the stigma of falling below those standards is extreme (Brady 2003). Poverty concentrations in developed countries tend to be heavily policed, meaning that the lived experience of poverty involves many encounters with the criminal justice system. Policing poverty has become particularly entrenched in the United States where escalating sanctions for nonviolent drug offenses have fueled mass incarceration that has hit poor disadvantaged minorities particularly hard (Western and Pettit 2005). Though policing is legitimized as preserving social order, high levels of criminal justice intervention increases the disorganization and poverty of communities who lose a significant fraction of young men to prison sentences. Poor communities have long been policed, but mass incarceration in the US takes this to a new level and is a model that is being imitated by other countries in other contexts. Latin American countries like Brazil, Argentina, and Colombia increasingly employ similarly heavy policing to control urban poverty concentrations, even to the point of militarizing social surveillance (Wacquant 2008b). Some of these measures have even diffused to the UK (Tonry 2004). Highly punitive crime control does little to reduce poverty and appears to make poverty concentrations even more intransigently persistent in the world's urban centers.

The character of urban social exclusion is affected by whether poverty tends to concentrate in the center of cities or on the outskirts of cities, spatial patterns which vary across world regions. In most of the developing world, poverty concentrates on the outskirts of metropolitan areas, while the rich and well-off live in city centers. The same pattern holds in Continental Europe and places influenced by those cultures. In Anglo countries, however, poverty is much more likely to concentrate in central cities, while the affluent live in the suburbs (Ley and Smith 1997; Dwyer 2010). These differences are explained above all by the settlement patterns of elites and the historical process of elite formation. For example, the Anglo pattern is linked to British history where the high value put on the country estate by the aristocracy transitioned to a preference for suburban living among the

bourgeoisie (Fishman 1987). In Continental Europe, on the other hand, city centers developed as cultural and residential oases (Fishman 1987). In both cases, marginalized populations were then relegated to places shunned by elites, as in the United States where poor African-American and immigrant populations were segregated in central city neighborhoods near industrial plants in Northeastern and Midwestern cities (Wilson 1987; Massey and Denton 1993). Urban poverty distribution is also affected by political decisions about where to locate public and subsidized housing, decisions which often concentrate poverty in the places that are undesirable to elites, like the French suburban banlieues and American housing projects (Wacquant 2008a, b). These patterns matter because the location and type of municipality where the poor live (large central city versus smaller suburban districts versus extra-legal settlements) affects their access to social services, government resources, public transportation, and jobs. This is especially true in the United States where so many social supports are devolved to local governments rather than the central federal authority (Dreier et al. 2001). Differences across countries in levels of poverty concentration are also linked to welfare state provisions, housing policies, and the history of racial/ethnic conflict (Musterd 2005).

Poor racial minorities and recent immigrants are particularly likely to be segregated from the rest of the city across many North American and European cities (Fong and Shibuya 2000; Kazemipur 2000; Musterd 2005; Smith and Ley 2008). Racial and ethnic minority status further marginalizes poor populations and housing segregation and discrimination appear to be facilitated by visible minority status. Racial prejudice diminishes public support for government aid for the poor and increases social distance between poor and nonpoor in a negative feedback cycle that reinforces poverty concentration into poor areas within major metropolitan areas (Wilson 1987). Poor immigrants are often race/ethnic minorities in destination countries and so often end up in highly segregated areas as well. This process is compounded if they are from racial or ethnic groups that are particularly derogated in the new country (Waters and Eschbach 1995). The result is that poor populations that are also ethnic minorities are more likely to be segregated in high-poverty places and those places are more likely to be deprived of resources and subject to state surveillance and policing than are poor populations that share racial and ethnic characteristics with the majority (Waters and Eschbach 1995; Western and Pettit 2005). These effects appear to be particularly strong in places with relatively large minority poor populations, partly because of racial threat effects where majority populations are particularly discriminatory where a marginalized group reaches a critical mass (Logan et al. 2004). The intersecting effects of racial and class marginalization produce distinctively persistent poverty traps where families remain stuck in a disadvantaged and derogated place across generations with little opportunity to move up or out (Gould 1999; Sampson and Sharkey 2008).

Research on poverty traps highlights the inertia of poor places where little appears to change, but this can be overstated given that the spatial distribution of poor neighborhoods within urban areas can and does change over time with new populations and new policies, even in contexts with long histories of urban poverty. In the US case, for example, poverty appears to have spread out more widely within the largest metropolitan areas at the turn of the twenty-first century, as suburban poverty is on the rise and central cities have become more attractive to elites. Suburban poverty has increased as newer suburbs attract affluent populations and older suburbs near the urban core decline and open up to lower-income populations (Dwyer 2007; Holliday and Dwyer 2009; Cooke and Marchant 2006; Cooke 2010). Growing Latino immigration in the US has also led to new patterns of poverty distribution through increasing migration direct to suburban areas as low-wage Latino immigrants seek jobs in the growing service sector in suburban areas, and as new immigrants are less constrained by older patterns of residential segregation and housing discrimination than

African-American populations (Frey 2001, 2006). Similar processes have occurred in Canada, where poverty has spread from the central cities and there is increasing direct immigration to suburban areas by poor Asian immigrants (Kazemipur 2000). Poor immigrants have also moved to a wider range of cities outside of traditional immigrant "gateways" to smaller metropolitan areas across all regions of the country (Waters and Jimenez 2005; Crowley et al. 2006; Frey 2006). In some large cities, previously poor neighborhoods have gentrified, dispersing poor populations to other parts of the city as elites take over places that were once highly disadvantaged (Sanchez 2009; Crowder and South 2005). This has been encouraged by a shift in housing policy away from public housing developments and towards market-based supports like housing vouchers that subsidize rent such as the moving to opportunity rental assistance programs (Wyly and Hammel 1999; Goetz 2003). These policies are justified at least in part as attempts to improve conditions for the poor and even reduce poverty overall, but as we discuss later, there is intense scholarly debate about the effectiveness of these policies.

Urban and Rural Interdependencies and Poverty Distribution

The organization of this chapter reflects the long-standing division of research on poverty distribution between studies of rural versus urban areas. These scholarly orientations are reflected in institutional divisions within universities, nongovernmental organizations, and research institutes as well. Studies of rural poverty are often concentrated in agricultural schools within universities, for example, while urban poverty is the province of arts and science departments and urban studies centers (Lobao 1996). Policy discussions can also be bifurcated in this way, and may be particularly affected by an "urban bias" in proposed remedies (Lipton 1989). These scholarly divisions oversimplify the complexity of poverty population distribution, and increasingly so, as there are ever-greater dependencies between rural and urban areas and populations over time. Advancing urbanization brings cities closer to many rural populations and blurs the boundary between city and country, complicating measurements of the share of poverty in rural compared to urban areas and the social organizational factors influencing each (Ravallion 2002; Wang et al. 2011). Economic and social interdependencies between cities and rural areas are further facilitated by increasingly sophisticated transportation and communication technologies. Complex patterns of migration back and forth between rural and urban areas connect communities through family ties and resource flows, including remittances in developing countries (Adams and Page 2005; Levitt and Jaworsky 2007). The connections may even be formally sanctioned and mandated, as in China where the state controls rural to urban migration among the poor by tying social rights for many to the rural village of origin (via *hukou*) and allowing urban migrants only partial and temporary status in the cities (Liang and Zhongdong 2004).

All of this suggests that future research on poverty distribution would be enhanced by developing alternative approaches that challenge the rural/urban divide as a scholarly heuristic that may have outlived its relevance. Herbert Gans (2010) has recently argued that we need a social science of "settlements" as a way to move beyond those divides and also bring into clearer focus population distributions in smaller towns and cities that often fall through the cracks of the rural/urban dichotomy. The complexity of migration patterns between different types of settlements suggests that studying social network connections may highlight the underlying social communities that connect rural and urban places, for example, and clarify the spatial boundaries and strategies of poor populations more than artificial divides between rural and urban poor (Kreager and Shröder-Butterfill Forthcoming). New GIS methods that integrate spatial data with various forms of social data would facilitate these studies (Kwan 2009). There are also commonalties across rural and urban poverty settings that once recognized may facilitate

understandings of the mechanisms that perpetuate poverty and the measures that can be taken to reduce it. Lichter and Brown (2011) observe that poverty traps occur in the countryside as well as the city, for example, and studying "rural ghettos" using some of the tools used to understand urban ghettos may advance understandings of both. This is especially true for studies of the spatial dimensions of racial disadvantage as racial minorities tend to be isolated in poverty-stricken communities across rural, urban, and small town settings (Lichter and Johnson 2007; Lichter et al. 2008, 2010). Integrating a view of the multiple layers of spatial communities that the poor move through and between will contribute to the increasing conceptual sophistication in studies of poverty as a multi-dimensional experience of social exclusion.

Bridging the rural/urban conceptual divide may be especially important in order to inform the many policy interventions that target the distribution of poverty (Tacoli 1998). To the extent that the poor are themselves moving across spatial boundaries and building connections across communities, social services that are excessively oriented towards a local place may miss opportunities to support families. Attempts to change the distribution of poverty may misfire if the policy is driven by erroneous assumptions about the spatial identifications of the poor.

Poverty Policy and Population Distribution

Policies to reduce or control poverty often aim to affect population distributions. Poverty policies that are less explicitly focused on population distribution can also have unintended consequences for the spatial isolation of the poor. In reviewing the literature on poverty policy and population distribution, we suggest that policies vary along two key dimensions. First, they differ in the goal for poverty distribution—does the policy attempt to spread the poor out or gather the poor together? Does the policy seek to increase or reduce mobility among the poor? We follow Wacquant (2008a, b) and call these alternative aims "dispersal" versus "containment". Second, policies vary in the formal justification or legitimation of the policy. Is the policy justified as a way to regulate and restrict the poor, or is it purportedly targeted towards aiding the poor or reducing poverty? We call these alternative legitimation strategies "control" versus "amelioration". The issue here is the legal and cultural legitimation of a policy, rather than the question of what the policy actually achieves. It is entirely possible for a policy that is justified as ameliorative to be in actual effect a measure of control and even for a policy justified as social control to have ameliorative effects. We consider legitimation to be a crucial dimension of poverty policy because public debates over policies are often decided on the issue of framing rather than evidence about policy effectiveness and because legitimation determines what is considered politically and socially feasible in a given time and place (Stryker 1994).

We summarize the two dimensions of population distribution and legitimation as a fourfold table in Fig. 22.1, and provide examples in each cell of the table. Starting in the upper left quadrant of the table with the containment and control cell, there are numerous policies that are primarily justified as attempts to control the movements of the poor and designate settlement areas for the poor. These policies often target specific categories of poor people, like immigrants, disadvantaged minorities, or indigenous populations (Massey and Denton 1993; Carino 2009). Limitations on migration both within and across national borders are often an attempt at poverty containment. There are pressures to close off immigration to poor populations in Europe and North America, but greater support for immigration by highly educated migrants (Munz 2007). The Chinese state has made significant efforts to control internal migration, especially rural-to-urban migration, by tying access to social services to origin communities (Liang and Zhongdong 2004). The punitive crime control policies that we discussed related to concentrated urban poverty contain some percentage of poor communities within prison institutions, and large rates of imprisonment

Population distribution aim

Cultural legitimation		**Containment**	**Dispersal**
	Control	Legally enforced ghettos Reservations Limits on migration Crime control	Slum clearance Urban renewal Indigenous resettlement
	Amelioration	Public housing Refugee camps	Mixed income housing Voucher programs Open migration

Fig. 22.1 Poverty policies that target population distribution

worsen poverty for family members left behind as a potential wage-earner is blocked from bringing resources into the family (Western and Pettit 2005). Increasingly, crime control efforts are aimed at illegal immigrants as well—for example, policies that require police to check for immigration papers during routine traffic stops—that may have the effect of reducing immigration overall, whether legal or illegal (Singer et al. 2009; Donato and Armenta 2011).

Containment policies can also be justified as primarily ameliorative, as represented in the lower left quadrant of Fig. 22.1. State support for public or social housing is legitimated as giving poor populations access to affordable housing. If public housing is provided only for poor families instead of families with a wider range of incomes, then the effect is to concentrate poverty. Governments tend to locate public housing in a small set of areas and cluster buildings together rather than spread public housing among mixed income neighborhoods. Public housing projects are thus one key source of concentrated poverty in urban areas, especially in developed countries (Jargowsky 1996; Taylor 1998). He et al. (2010) show that public housing contributes to poverty concentration in China and so this may become more important over time in less developed countries as well as urbanization progresses. When social housing is provided for a larger portion of the population including working class and middle class families, the poor are less likely to be isolated away from more-advantaged families (Murie and Priemus 1994). In a different vein, refugee camps are often aimed at ameliorating conditions for poor migrants fleeing natural disaster or political unrest by state actors and nongovernmental organizations like the UN or the International Red Cross (UNHCR 2006). The camps also embody containment goals as states attempt to control the migration of a troubled population and nongovernmental organizations seek to protect a population from exploitation, although this activity can also breed the conditions for further violence and victimization (Lischer 2006).

Our categorization of containment policies would likely be challenged by some scholars. Interventions that we have argued are legitimated as population control efforts, such as legally mandated segregation, often come cloaked in paternalism, which may cite benevolent reasons

for containment, including poverty amelioration (Jackman 1994; Soss et al. 2011). Other scholars argue that public housing policies have at times been more targeted at controlling poor populations than at improving conditions for the poor (Wacquant 2008a). We think there is still use in analytically distinguishing these justifications for conceptual purposes because outcomes for the poor depend in part on these Legitimation processes. In empirical reality there is a continuum of justifications from control to amelioration and particular policies likely are legitimated with a mix of justifications along that continuum. More research on these practices themselves would be useful for understanding the possibilities for poverty policy (Schoene 2011).

Other social policies aim more to disperse poor populations, and again vary in legitimations of control and amelioration, along the right column of Fig. 22.1. Slum clearance by governmental or quasi-governmental groups clear areas of poor settlement under justifications of controlling poverty concentrations as a social problem. These are seldom accompanied by relocation options for the poor community and so the effect is often dispersal of the population. These actions are particularly likely with populations of squatters, but more established poor and minority populations are sometimes uprooted in policies of urban renewal that seize property under eminent domain laws to make way for uses deemed more useful or profitable by governments (Arimah 2010). Poor indigenous populations have been subjected not only to containment policies, but to resettlement policies that aim to disperse the population among the majority, sometimes in order to shut down the reservations that were created by the very same governments, following a cycle of containment and dispersal that other poor populations have faced as well (Sandefur et al. 1996; Wacquant 2008a). Furthermore, in developing countries such as Brazil, localities will often withhold public services such as water connections to the informal housing sector to control the growth of high-poverty areas (Feler and Henderson 2011). Such tactics of strategic exclusion place a heavier burden on the most impoverished families and erect significant barriers to mobility by deterring in-migration of impoverished families to areas of greater economic opportunity.

Policies justified as reducing poverty also try to deconcentrate poverty. As we have discussed, a large body of research shows that living in a poor neighborhood compounds the disadvantages of poverty by concentrating social problems and limiting the resources available for community investments (Wilson 1987; Harding 2003; Sampson et al. 2002; Sampson and Sharkey 2008). Partly because of this research, poverty amelioration policies like public housing developments that concentrate poor populations have fallen out of favor in some policy circles and there is an increasing focus on integrating the poor with more-advantaged populations in mixed-income communities (Bolt et al. 2010). The theory is that if the poor live among higher-income groups, they will have access to better local services and educational opportunities and be exposed to less crime and disorder, improving the life chances of the poor (Joseph 2006). As a result, the US system has moved away from public housing and towards housing vouchers to use on the general housing market partly in the hope that poor populations will become less concentrated, again with intimations of that cycle of containment and dispersal that we discussed earlier (Wacquant 2008a; Crump 2002). Similar efforts to encourage mixed-income communities have been tried in Europe and Australia (Wood 2003; Graham et al. 2009: Bolt et al. 2010).

One of the most vigorous contemporary debates in research on poverty and population distribution is over the effectiveness of poverty deconcentration policies in reducing poverty. Is dispersing the poor a good strategy for reducing poverty? Similar to containment policies, there are debates over whether dispersal policies are really ameliorative or are ultimately a form of social control and a land grab by elites just like slum clearance and urban renewal (Goetz 2003; Gans 2010). There are also debates about how much deconcentration helps the poor. A large number of studies ask whether migration out of

poor neighborhoods improves outcomes, including studies of the Moving to Opportunity and Gautreaux experiments in the US (for good reviews see Sampson et al. 2002; DeLuca and Dayton 2009). These policy experiments and interventions move poor populations out of high-poverty neighborhoods into less poor neighborhoods and then evaluate whether the families who move do better in their new circumstances (Keels et al. 2005; Deluca and Dayton 2009). There is evidence of better outcomes for poor who live in more affluent settings and who move from very poor to less poor neighborhoods (e.g. Keels et al. 2005; Rosenbaum et al. 2009), though there are also studies that find few effects from mobility (Ludwig and Liebman 2008). One difficulty in interpreting the findings from the MTO and similar projects is that the assignment of the moving versus non-moving groups is not completely random but inevitably is affected by the circumstances of those selected into the experiment. As a result, families that do move may be better off in various ways prior to moving compared to those who stayed behind (for example by being in better health, or having more social support), biasing the results towards a finding of positive effects of moving (Clampet-Lundquist and Massey 2008). Robert Sampson (2008) suggests that the selection processes themselves are better conceptualized as part of object of explanation rather than as a competing explanation—it is crucial to understand how and why deconcentration policies can help poor families, and which poor populations are best helped.

Indeed, the best outcomes occur when poor people move to substantially higher-income neighborhoods, but most studies show that the poor tend to end up in only slightly less poor places even with support for moving to more advantaged neighborhoods (Sampson 2008; Oakley and Burchfield 2009; Dwyer 2012). The result is not so much poverty deconcentration as poverty redistribution, with limited positive effects (Galster 2002; Clark 2008; Bolt et al. 2010). Significant barriers to mobility that make it hard for poor families to achieve significantly improved neighborhood prospects, including lack of affordable housing, discrimination, and less access to social services in more-affluent neighborhoods (Rosenbaum et al. 2009). Mobility is particularly difficult for racial and ethnic minorities, who are likely to be segregated in developed countries (South et al. 2005; Clampet-Lundquist and Massey 2008; Bolt and van Kempen 2010). There are also real costs of mobility for poor families, including potentially the loss of supportive social networks in the origin neighborhood that may reduce the ameliorative effects of moving (Pashup et al. 2005; Bolt et al. 2010). There is an emerging consensus that to be successful, poverty deconcentration policies need to provide significant aid and social support for poor families to move to substantially improved neighborhood contexts, and that in those conditions the policies can be quite effective in improving health, education, and social mobility prospects for poor families (DeLuca and Dayton 2009). However, that level of funding and intervention is difficult to secure and implement on a large scale.

In sum, policies that target the population distribution of the poor can be effective in ameliorating poverty, but these policies are also limited in various ways. Policies that concentrate poverty can also concentrate the social problems attendant on poverty, while policies that deconcentrate poverty may have limited effectiveness without substantial investments. These policies may easily play into the interests of powerful interests in urban development in controlling the land where the poor settle and end up harming the poor populations they are intended to help. For all of these reasons, some question whether poverty policies should target population distribution at all. These critics argue that the best way to reduce poverty is to improve the economic prospects of the poor through direct government transfers, job growth, and educational opportunities (Partridge and Rickman 2005; Gans 2010; Bolt et al. 2010). These are far more effective in helping poor families than intervening in their residential choices, and improvements in poverty distribution will follow. These arguments are supported by evidence that poverty reduction tends to occur during

times of economic growth rather than as a result of policy interventions in population distribution. Similarly, reductions in concentrated urban poverty happen most in periods of robust income growth (Jargowsky 2003). Economic growth can be fickle and constraints on government spending can make direct poverty reduction measures difficult politically, however. Policy makers will therefore likely continue to target poverty population distribution, for both control and amelioration reasons, and so we need continued research on the effects of poverty concentration and dispersal on families.

Conclusion

Understanding poverty in the twenty-first century is inevitably bound up with the spatial distribution of poor populations, which significantly affects the level of social exclusion experienced by the poor. Are the poor highly isolated or spread out among more advantaged populations? Do the poor have access to social services, jobs, and educational opportunities? Do poor populations live within government jurisdictions that provide rights and security, or are they largely in extra-legal contexts ruled by more informal social ties? The answers to all of these questions and many others depend on the spatial distribution of the poor across land. The population distribution of the poor is also an important barometer of change in poverty levels worldwide. Urbanization appears to be a largely equalizing force while ruralization tends to indicate worsening poverty. Migrations of the poor can reduce poverty by improving circumstances for migrants, lowering strain on a sending community, and opening up resource flows from more advantaged regions to poor regions through social ties between migrants and non-movers. The importance of population distribution in the experience of poverty and opportunities for poverty reduction makes it a favored target for policy makers and governments in efforts to control poor populations and reduce poverty alike, with both positive and negative consequences for the poor.

For all of these reasons, research on population distribution and poverty continues to be urgently important and at the forefront of understanding trends in poverty and poverty amelioration. We think that there are three main research areas that would be particularly fruitful in future developments: (1) more sophisticated approaches to spatial measurement; (2) bridging the rural/urban divide; and (3) seeing the geographic distribution of poverty as arising out of a system of inequality. We already discussed the first two earlier in the chapter, and so will add here only that the two goals are in fact linked as better spatial measurements would enable the more complex view of poverty distribution that is required by a move beyond the rural and urban focus of past research. It would be especially useful to develop a perspective on different types of poverty distributions that are characterized not just by population density, but by other dimensions of the associations between poverty and place. For example, the degree of socioeconomic mobility available in a particular place may be just as important as proximity to a population center, distinguishing poverty traps from locations that provide opportunities to move up (Gramlich et al. 1992; Quillian 1999; see also Wright and Ellis, Chap 2, in this volume for more on migration and mobilities).

Most studies of poverty distribution touch on the larger structures of inequality and political economy that produce the associations between poverty and place that we have discussed here, but the overall structure of inequality is often rather in the background. When it is addressed more explicitly, it is often as a measurement issue, as in the challenges of comparing poverty rates between countries with different levels of inequality. A range of poverty measures attempt to incorporate the degree of inequality in a place by way of generating comparisons across time and place, as for example, in relative measures, poverty gap measures, and many social exclusion measures. These approaches in a sense attempt to control for levels of inequality in making comparisons. But shifts in inequality also have implications for poverty distributions as a causal factor. Rising concentrated poverty in the US has

been linked to rising income inequality (Massey and Eggers 1993; Massey 1996; Jargowsky 1997; Iceland 2003a; Berube and Kneebone 2006). Growing income inequality also appears to have increased the likelihood of spells of poverty over the life course for the average American, a pattern that may have implications for poverty distribution as well (Sandoval et al. 2009; Reardon and Bischoff 2011). Shifts in global inequality also affect poverty distributions (Sala-i-Martin 2006; Ferreira and Ravallion 2008). The intersections of class inequality with racial inequality is also important, and more complex than often recognized, but seeing the poverty concentrations that result as the intersection of these multiple systems of inequality improves our understanding of the processes that lead to poverty traps for minority populations (Quillian 2012). Racial stratification systems are also evolving and increasingly studies in diverse societies like the US include multiple racial groups in analysis rather than a single dichotomous contrast between advantaged and disadvantaged (Lichter et al. 2005).

We would also like to see more approaches that see poverty as a function not only of what is happening to poor populations, but as intimately related to what more-advantaged populations are experiencing as well. The particular distribution of the poor often develops in reaction to the desires and actions of rich populations, whose attempts to control, avoid, or take advantage of poor places is often more consequential for outcomes among the poor than any actions taken by the poor themselves (Dwyer 2007, 2009, 2010). This view of the interactions and connections between the distributions of rich and poor populations helps clarify the underlying mechanisms that drive the spatial distribution of populations across the full stratification spectrum, and addresses the big questions about the causes and consequences of spatial concentrations and dispersals of poverty. With a richer theory, studies could move into simulations and agent-based modeling in order to test expectations about how changes in degrees of income segregation may affect poverty distributions, and how existing poverty concentrations might be affected by changing housing preferences.

There were substantial reductions in world poverty entering into the twenty-first century, but also increasing inequalities between and within countries. Population concentrations of poverty become even more stark in a world with lower levels of poverty and a worry for the future is that further reductions in poverty in the twenty-first century will be impeded by poverty traps of various sizes and shapes. The advances in conceptualizing and measuring poverty distributions that we have discussed here give us confidence that the research community will continue to provide the tools to answering the most pressing questions about poverty persistence and reduction that emerge in the coming decades.

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Migration, Assimilation and Social Welfare

23

Jennifer Glick and Julie Park

Introduction

Perhaps no topic related to migration garners more attention and scrutiny than the relative successes or failures of migrants and their offspring. The classic immigration story inevitably invokes the bravery and ambition of the migrant seeking wealth and security not only for themselves but for their children and grandchildren. Understanding how immigrants fare in their chosen, or forced, destination is complex. First, success is relative. For the migrant themselves, success may be determined by the quality of life in the community of settlement when compared to their pre-migration life in the community of origin. For natives, migrant success is much more likely to be judged on the basis of their integration and competiveness within the community of settlement. Second, success may occur in many dimensions. Immigrants' success may be viewed in terms of their competiveness in the labor market, the educational attainment of their children or their participation in civic and social life. Policy makers are, of course, very interested in these answers. Intergenerational mobility has important implications for national and sub-national economic growth and stability. Opinions about whether immigrants are a net gain or net cost for society fuels debates over immigration policy and policies aimed at influencing immigrant settlement (Smith and Edmonston 1997). At the same time, this mobility is an important source of pride and satisfaction within the familial domain. Aspirations for upward socioeconomic mobility are a key motivator for migration in the first place (Feliciano 2005; Kao and Tienda 1995; Massey 1995).

This chapter reviews the theoretical perspectives used to understand immigrant assimilation, the challenges to studying assimilation for diverse immigrant origins and across diverse locations of settlement. The focus here is on structural assimilation or incorporation: the integration and involvement of immigrants and their descendants into the education, labor and residential systems of the communities in which they settle. Variations in education, labor market and residential incorporation can be attributable to differences in the initial selection of immigrants, their reception in the community in which they settle or, as is most likely, to both. Although there are many factors associated with selection and reception, the policy realm can be manipulated to influence both. And, migration patterns have shifted in recent years bringing new groups together in

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_23

non-traditional communities of settlement, so this review also focuses on variations in these outcomes among immigrants and their descendants in diverse contexts and policy regimes.

Assimilation Theory and Its Variants

Assimilation theory sets out expectations for immigrants and subsequent generations. According to the original model of assimilation, immigrants and their descendants are expected to incorporate into the community of settlement by taking on the characteristics of the majority in the destination (Alba and Nee 2003). In the earliest formulations of the theory, scholars from the Chicago School observed the adjustment of European migrants to life in the United States. Park and Burgess broadly defined assimilation as "a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments and attitudes of other persons and groups and, by sharing their experience and history, are incorporated with them in a common cultural life" (Park and Burgess 1921: 735). Over time and across generations, a traditional articulation of assimilation theory predicts that educational attainment, labor market incorporation, spatial distribution, language use and even marriage patterns will come to resemble those of natives in the communities of settlement (Gordon 1964; Waters and Jimenez 2005). A re-articulation of this classic model emphasizes that both immigrants and natives may be shaped by their interactions and may indeed both move towards one another to form and reform a 'mainstream' benchmark against which even newer arrivals may be measured (Alba and Nee 2003).

In the past few decades, scholars have questioned the extent to which newer cohorts of immigrants and their children in the United States, Western Europe and other contexts would experience the trajectory laid out by original articulations of assimilation theory (Gans 1992; Massey 1995; Portes and Zhou 1993). The original conceptualization of assimilation was based on a relatively short era of high European outmigration to the United States. This high point of immigration was followed by a period of relatively low immigration in which the second generation came of age. While European outmigration decreased after this period, immigration from other origins continued and increased in the post-1965 era. This has led to the development of several variants of assimilation theory used to analyze the progress of these 'new' immigrants and their descendants. These variations suggest that intergenerational mobility proceeds differently for groups facing discrimination and structural barriers that are not encountered by immigrants from other origins. In the 'segmented assimilation' framework, for example, some second generation youth, hampered by racial discrimination and the segmented labor market, experience 'downward assimilation' in which their own educational and occupational achievement is limited (Haller et al. 2011; Portes and Zhou 1993; Portes and Rumbaut 2001). But segmented assimilation can also make room for positive trajectories even for groups facing structural barriers to assimilation. In this case, some immigrant groups, endowed with greater stores of social capital, may be able to offer second generation youth support and protection from the deleterious effects of discrimination and prejudice in the community of settlement (Portes and Rumbaut 2001; Zhou and Bankston 1994).

There is little consensus in the research about which variant of assimilation theory is the correct one to typify immigrant assimilation today (see Perlman 2011). For example, early articulations of assimilation theory spoke of an immigrant generation followed by the children of immigrants born in the country of settlement (i.e. the second generation) followed subsequently by a third generation and so forth. Assimilation was expected to proceed across these generations. Even segmented assimilation often focuses on the first and second generations with little clarity about what may occur in the third generation relative to the fourth and so forth (Telles and Ortiz 2009). Among those of Mexican origin, a group with a long history in the United States, there are many individuals who

can trace their US origins back several generations and this may shape patterns of self-identity (Jimenez 2011). If there is ethnic attrition among those in the third and higher generations, the composition of the 'native' reference groups used in much assimilation research may not accurately reflect the outcomes across generations. Should individuals with higher levels of assimilation (i.e. greater socioeconomic integration) be less likely to identify with their grandparents' national origins than those with lower socioeconomic integration, there may be apparent downward or stagnant assimilation across the generations (Bean and Stevens 2003; Duncan and Trejo 2011).

Further, the more recent variants of assimilation theory were primarily developed to describe the potential for intergenerational mobility stagnation in the modern US context. The factors that lead to blocked opportunities in the United States may not apply elsewhere. Race, ethnicity or skin color may be a basis for discrimination and blocked assimilation in the United States (see Bean and Stevens 2003), while religion may be a more important barrier in parts of Europe (Alba et al. 2011). These perspectives are only recently being evaluated as a tool for describing outcomes in other contexts experiencing recent growth in immigration (Vermeulen 2010).

Selection of Immigrants and Assimilation

Regardless of the version, all perspectives of assimilation must consider the extent to which diversity of outcomes stems from the selectivity of migration (Chiswick et al. 2008; Feliciano 2005; Pichler 2011) as well as the different reception faced by immigrants from diverse origins. Immigrants are not randomly selected from the origin community and not all members of a society choose to migrate. In some cases, only the most educated and well-resourced members of a society can migrate while in other cases immigrants with low skills are drawn to migration to improve their economic prospects. One explanation then for observing differential socioeconomic mobility among immigrants from different countries of origin is that these immigrant streams consist of individuals with different levels of skills to begin with. Certainly this was the concern of Borjas (1985) and others who have warned that the human capital possessed by more recent cohorts of immigrants to the United States is below that of previous cohorts. Much of this concern has been focused on the changing national origins of immigrants and comparing those from different countries. But even the selection of immigrants from the same country may vary by region or urbanicity and selection patterns within a community also change over time (Fussell and Massey 2004; Massey and Aysa 2005).

Selection of immigrants is partially determined by the policy of the countries to which they migrate. Many scholars point to US immigration policy revisions in 1965 as a point from which the composition of immigrants changed. Turning away from national quotas to a policy of family reunification helped increase the number of immigrants from countries previously underrepresented in migration to the United States (Jasso and Rosenzweig 1990). Other countries that have traditionally received many immigrants, Canada and Australia for example, base admissions more heavily on the skills potential migrants possess and this has led to a different trajectory of assimilation outcomes in some cases (Antecol et al. 2003). Immigration to Western and northern Europe has also increased in recent years. The European Union allows for easier mobility across some countries so that individuals from member States migrate with few barriers or obstacles to social and economic participation in the new country of settlement (Silberman et al. 2007). But non-European migration has also been facilitated by various policies across Europe (Mahroum 2001). Policies that offer temporary migration for workers are also blamed for poorer socioeconomic mobility and assimilation outcomes among the immigrants and their descendants (Brubaker 1990; Worbs 2003) while policies that attract high skilled immigrants result in greater apparent economic integration among the foreign born (Mahroum 2001).

Finally, there are immigrants who arrive in the community of settlement without authorization. These arrivals must find work and shelter while also evading detection by the State (Donato and Armenta 2011; Menjivar and Abrego 2012; Singer and Massey 1998). Their opportunities for upward mobility are likely to be limited by their undocumented status (Abrego and Gonzolas 2010; Massey et al. 2002). Without recognition from the state, migrants and their offspring in developed economies are confined to unfavorable labor market conditions and denied opportunities for economic and educational integration (Maroukis et al. 2011; Schuster 2011). Policies that govern who gets in and the conditions under which they qualify for assistance all influence structural incorporation in the community of settlement.

Other selection factors may also be associated with differential assimilation trajectories. The timing of migration in the life course is an important determinant of structural assimilation. Migrating in childhood and adolescence is associated with very different outcomes than migrating in adulthood (Bleakley and Chin 2004; Hirschman 2001; Oropesa and Landale 2009). Adult migrants may have accrued education and labor market experience in the country of origin. They may have already married and had their own children prior to their migration. Child migrants, on the other hand, accrue human capital in the country of settlement. These 1.5 generation individuals share the experience of moving to the United States from another country with other members of the first generation. But, they also share some important socialization experiences with the second generation. Both 1.5 and second generation individuals live with immigrant parents but receive the majority of their schooling and their first labor market experiences alongside third generation age mates (Rumbaut 2004). Of course, there are some important differences between the opportunities for the 1.5 generation and their second generation peers in some countries. Although the socialization experiences of 1.5 generation and second generation children in the country of settlement do not differ considerably, other opportunities for full social and political participation can vary considerably according to the policies of the country of settlement. Opportunities for the second generation may be determined by the extent to which citizenship is automatic or accessible at all. Conferring citizenship on all individuals born in the same jurisdiction at least implies that opportunities for social and political participation are expected (Brubaker 1990). Countries that confer citizenship to some descendants of immigrants while excluding others may be creating a segmented system of social, economic and political incorporation among second and higher generation individuals (Worbs 2003).

Reception and Assimilation

Scholars addressing the possibility of 'segmented' assimilation, particularly in the US context, have focused less on selection factors as determinants of differential assimilation trajectories and have instead focused more on variations in the treatment of immigrants and their descendants in the community of settlement, the 'context of reception' (Gans 1992; Hirschman 2001; Zhou 1997). Here the argument is that conditions in the community of settlement alter the potential for human capital acquisition, labor market participation and residential mobility. According to segmented labor market theory, developed urban economies rely on the low-wage labor of immigrants to provide services and meet the needs of the primary labor market (Piore 1979). The availability of jobs for low-skilled migrants offer a motivation for migration but also segments these migrants into labor markets and geographic areas that offer little opportunity for upward mobility and the possibility of stagnation into the second generation.

Immigrants are also met with very different resources in the form of community amenities (housing, schooling etc.) as well as direct government assistance (refugee resettlement, welfare use, etc). There are important differences in the social welfare systems of the largest industrial economies (Esping-Andersen 1990). And, these countries have very different levels of social welfare available for immigrants and their descendants (Sainsbury 2006). These policies change over time; The United States has significantly changed the eligibility requirements for immigrants to receive various

services. The 1996 Personal Responsibility, Work, and Reconciliation Act (PRWORA), for example, made non-citizens ineligible for many federally supported welfare programs. This reduced resources available to citizen children if they were living in households with non-citizen adults or siblings (Capps et al. 2003).

Differences in the resources available to immigrants in the receiving community can influence patterns of adaptation and well-being (Sainsbury 2006; Van Hook 2003; Van Hook and Balistreri 2006). Reductions in Food Stamps, for example, increased the experience of food security among children of non-citizens (Van Hook and Balistreri 2006). Following reform, even welfare eligible families may have reduced their willingness to apply for public resources thus reducing children's well-being and possibly slowing socioeconomic assimilation across generations. For example, immigrant families experience multiple barriers to program participation and had reduced participation when compared to native families in the United States (Kalil and Crosby 2010). Mixed status families, with citizen, non-citizen, and, in some cases, undocumented children face particular challenges accessing resources when one member of the family may be eligible for services that are inaccessible to other family members.

Health insurance and health care access are other arenas that may diminish the potential for upward assimilation among some immigrants in the United States. Immigrants' lower access to employer sponsored health insurance is largely a function of low coverage among non-naturalized immigrants. Differences between native-born and naturalized citizens are quite small (Buchmueller et al. 2007). Further, mode of entry to the United States seems to be a factor as well as those who entered with diversity visas are less likely to be insured than those who arrived with family or employer sponsorship or as refugees – statuses that are more likely to include access to resources such as health insurance (Pandey and Kagotho 2010). And, localized changes in immigration laws or enforcement can further reduce access to health care (Toomey et al. 2014).

Finally, just as the composition of immigrants changes over time, conditions in the receiving country can change as well. Some immigrant groups may face discrimination based on their ethnic origins that can hamper subsequent economic incorporation and mobility (Gans 1992; Vermeulen 2010). But, attitudes towards immigrants vary across areas of settlement and over time and this too may promote or deter assimilation (Brown and Bean 2006; Silberman et al. 2007). Increases in localized enforcement of immigration laws and State level immigration legislation can lead to fear, increased experiences of discrimination, added stress due to uncertainty, decreased mobility, and distrust of law enforcement that can all hamper structural incorporation and extend beyond undocumented immigrants to their family members as well (Ayón and Becerra 2013; Brabeck and Xu 2010). Labor markets that rewarded lower skilled workers at one point in time may offer fewer employment opportunities for the same skills subsequently. Understanding how immigrants fare and the extent to which their children and grandchildren succeed requires an examination of immigrant characteristics, the migration process and the changes that occur in the context of reception.

Complexities of Selection, Reception and Challenges to the Study of Assimilation

To really understand the relative impact of selection versus reception on the structural assimilation of migrants, we would need a natural experiment; a random assignment of movers and stayers from a random mix of geopolitical and economic contexts. Then researchers could tease out the contributions of immigrants' individual traits, skills and relationships from the impact of community characteristics and the associated structural barriers and advantages that lead to socioeconomic incorporation and intergenerational mobility. Of course, we cannot conduct such an experiment. Even the occurrence of, and participation in, 'forced' migration is not random.

The solution to the dilemma of understanding differential outcomes among immigrants and their offspring across groups and contexts in the absence of random assignment has been twofold. First, when possible, analyses disaggregate immigrant groups into their specific racial, ethnic, religious or national origins within the same receiving society. Careful multivariate analyses can detect the amount of variation in education, income or other outcomes that is due to theoretically relevant traits among immigrants and their descendants including human, social and cultural capital and other migration specific measures such as duration of residence in the receiving context. There are, of course, limitations to this approach. These studies that rely on large surveys must usually use national origins or racial/ethnic labels to proxy selection or at least demarcate origin communities. But even a specific national origin grouping masks considerable variation among immigrants and their motivations for migration. It cannot proxy selectivity of migration nor indicates cultural or familial origins with precision (Akresh 2006; Massey 1995). And, such self-reported traits may change as immigrants come to identify with or reject the racial/ethnic labels of the community of settlement (Waters and Jimenez 2005). Further, much of the debate over assimilation theory and its variants stems from a conflating of cohort change and individual achievement (White and Glick 2009). Presenting an accurate picture of the intergenerational progression within these groups is difficult without complex or longitudinal data and careful cohort-specific models that can identify the immigrant generation's experiences and measure the success among their descendants (Telles and Ortiz 2008).

The second solution to understanding differential outcomes among immigrants has been to compare the educational and labor market success of immigrants from the same origin countries in different communities of settlement. The reasoning behind this approach is that variations in outcomes may be due to differences in the resources and opportunities available in communities of settlement and that comparing immigrants from the same national origin groups helps to hold origin characteristics constant. This approach has been taken in studies of immigrants across urban and peri-urban areas in the United States and by comparing outcomes for immigrants across countries such as Asian origin groups in Canada versus the United States or Turkish and North African migrants to different parts of Europe (Crul 2011). Here too there have been considerable challenges to studies. For example, immigrants from the same national origin groups may be differentially selected into their communities of settlement. The same human and social capital that assists immigrants with their moves and adjustments also helps distribute them into specific locations. One solution is to include the educational and economic characteristics of immigrants *at the time of migration* as well as the education of immigrants from the same national groups.

One final challenge to understanding structural assimilation across generations is worth note. The reality for many immigrants and their offspring is that of considerable overlap in nativity and generation status at any one time. So, for example, foreign born children reside with their US born siblings (Capps et al. 2003). The siblings share familial contexts, peer groups and residential environments yet show up in analyses as members of the first and second generation respectively. And, the context of reception for these families may largely depend on the mixed status composition of related individuals because social welfare policies in the community of settlement may treat individuals in the same family quite differently. Thus, US born children in the United States may be eligible for services that their foreign born siblings are not (Capps et al. 2003). The complexity extends even more if the legal status of family members also differs from one another (Fix and Zimmerman 2001). Individual achievement over time may be predicated not only on one's own nativity or generation status but on the statuses of those with whom lives are intertwined.

Structural Assimilation Outcomes

The indicators of structural assimilation are closely intertwined. Whether or not immigrants

and their offspring succeed in acquiring educational credentials is also directly connected to their subsequent success and integration in the labor market. Residential location is also associated with economic opportunities, earnings and labor market mobility. The opportunities embraced and barriers encountered by the first generation in all of these realms have important implications for the potential for members of the second generation to go even further.

Education in the First Generation

For the first generation, the motivations for migration and the timing of migration in the life course are strongly associated with subsequent educational attainment and economic returns. Low education accounts for much of the earnings gap between immigrants and their US born counterparts (Betts and Lofstrom 2000). Selection plays an important role here, of course. Immigrants originate from very different educational systems and enter the community of settlement with very different levels of education (Akresh 2007; Feliciano 2005). The reasons for migrating also vary and may lead to divergent educational outcomes.

Location of schooling matters. For example, immigrants who received some schooling in the United States tend to receive greater economic returns to their education than those who did not receive any schooling in the United States (Akresh 2006; Jackson et al. 2010). This can lead to very different attainment patterns across groups when there is variation in the likelihood that migrant youth enroll in school at the destination (Akresh 2007; Oropesa and Landale 2009). If labor migrants from less developed countries enter the labor force directly, bypassing the educational system entirely, their opportunity for economic mobility is further curtailed by a developed economy that requires higher educational credentials.

Because location of schooling matters so much for subsequent economic returns, it is often useful to separately investigate the educational assimilation of immigrants who arrive in the community of settlement as children (i.e. the 1.5 generation) from those who arrive as adolescents or adults (Rumbaut 2004; Oropesa and Landale 2009; Worbs 2003). Of course, not all child migrants enter school in the community of settlement. Among those who do, however, educational attainment is more similar to that observed among the second generation than among those who arrive at older ages (White and Glick 2009). Among immigrants from Mexico, for example, about one third of those who arrived before age 12 failed to earn a high school diploma as compared to two thirds of those who arrived between ages 12 and 18 (Baum and Flores 2011). Here too policy regimes matter. Although education in the United States is available to undocumented students through secondary school, pursuit of postsecondary education is limited for these youth (Abrego and Gonzolas 2010). Policy changes, such as the 1986 IRCA reform and the Obama administration's temporary deferrals, which provide greater access to postsecondary institutions for undocumented youth, result in higher levels of college attendance and educational attainment (Cortes 2013; Greenman and Hall 2013).

Educational Outcomes for Offspring of the First Generation

Much of the ongoing debate over the shape of assimilation trajectories is focused on the educational outcomes of the children of immigrants (Farley and Alba 2002; Haller et al. 2011; Kasnitz et al. 2004; Worbs 2003). The strong educational selectivity of some immigrants means that many second generation youth have at least one parent with a high level of education while others come from families where neither parent has completed much formal schooling. For example, in the U.S., over half of the children of Indian immigrants have parents with college

degrees compared to fewer than 5 % among children of Mexican immigrants (Feliciano 2005; Hernandez et al. 2009). Similar selectivity can be observed among immigrants in Europe such as Turkish immigrants to Germany (Kalter 2011; Worbs 2003).

Children of immigrants (1.5 and 2nd generation) face schooling in the country of settlement. Unlike their native born peers without immigrant parents, these children must navigate an education system with which their parents may have no direct experience. Overall, in the United States, the 1.5 and 2nd generation tend to do as well in school as children in the third and higher generation once the socioeconomic status of the family of origin is taken into account (Waters and Jiménez 2005; White and Glick 2009). The economic returns to education among the second generation are also similar to those in the third and higher counterparts, unlike that of their first generation counterparts. Many of these findings are consistent across many countries of settlement including Britain, Canada and Sweden among others (Jonsson and Rudolphi 2011; Rothon et al. 2009; Worbs 2003).

In spite of overall generational progress, there is considerable evidence that children of immigrants from some groups do not fare as well as their counterparts from other origins which raises concerns once again about the selectivity of immigration from diverse origins and possible discrimination or differential barriers to achievement in communities of settlement. Turkish second generation men and women in Belgium, for example, exhibit lower levels of completed education than their counterparts (Phalet and Heath 2011). In Germany, second generation individuals of Turkish descent are more likely to be in vocational education tracks than their German origin counterparts (Worbs 2003). There are other exceptions to intergenerational progress. This is particularly noted in the cases of the second generation of Mexican origin in the United States or African migrants in Western Europe (Portes and Rumbaut 2001; Silberman et al. 2007; Suárez-Orozco and Suárez-Orozco 1995). It is these findings that feed the ongoing debate over the persistence of a segmented pattern of assimilation and concern about persistent structural or policy barriers to education (Greenman and Hall 2013; Haller et al. 2011).

Characteristics of the immigrant generation and the conditions in the community of settlement may interact to lead to very different trajectories in the second generation. In other words, selection and reception create divergent opportunities for immigrants and for their children. Family socioeconomic status, particularly low levels of formal education among first generation parents, impact the educational pathways pursued by the second generation. And, immigrant parents with limited education of their own and no personal experience with the formal education system in which their children are enrolled, face barriers to assisting their children even if their educational aspirations for these children are very high (Glick and Hohmann-Marriott 2007; Kao and Thompson 2003). Socioeconomic status helps explain much of the variation in early academic skills among children of Turkish origins in Germany just as they do for Mexican origin children in the United States (Becker 2011; Crosnoe and Turley 2011). Economic disadvantages also have a direct impact on the quality of schools and neighborhoods to which immigrants' children are exposed. Living in poor segregated neighborhoods helps explain much of the gap in school performance among children of Hispanic immigrants in the United States when compared to native non-Hispanic whites (Pong and Hao 2007).

Cross national comparisons of academic performance suggest that those countries with the greatest levels of school segregation by family socioeconomic status are also those with the greatest gaps in student performance when comparing children of immigrant origins with those of natives (Park and Kyei 2010). Alba et al. (2011) note that differences in the educational systems of receiving countries, particularly the variation across European countries and the United States, shape the opportunities and educational outcomes for immigrants and their descendants. For example, the Dutch schooling system tracks children early creating a greater

proportion of Turkish and Moroccan children in non-professional, non-college preparatory tracks with similar tracking apparent in Germany as well (Crul and Doomernik 2003; Worbs 2003). In the United States, there is a great deal of variation in the resources available across schools. Children in segregated and poor resourced schools tend to have overall lower levels of educational attainment than those in higher economic areas regardless of their parents' origins. Thus, communities of settlement can offer very different types of resources and supports that may lead to wider or narrower generational gaps in educational progress. Immigrant groups that are able to mobilize considerable social capital to provide resources outside of the formal schooling system can bolster children's success (Zhou and Bankston 1994; Zhou and Kim 2006).

Employment and Earnings Among the First Generation

When examining the economic incorporation of first generation immigrants, selectivity once again comes to the fore. Here selection of adult immigrants may be determined by conditions in the country of origin but also determined by the immigration policies of countries of settlement. Canada, the United States and other countries that receive many immigrants have designed their policies to permit the migration of highly skilled immigrants as well as low-skilled immigrants who provide specific types of labor such as agricultural work, mining and manufacturing (Massey et al. 2002; Crul and Doomernik 2003). This can shape the selection of immigrants as well as the opportunities for economic assimilation among those immigrants. Dustmann and Fabbri (2005) note that there has been an improvement in the skill composition of the foreign born to Britain over the last 20 years. Changes in the composition of immigrant cohorts can also alter the relationship between nativity and earnings over time (Antecol 2000). George Borjas (1985) asserted that changes in immigrant selection altered observed nativity differences in earnings.

Beyond selection, labor market variation across countries but also within countries of settlement play a large role in explaining earnings differentials among immigrants. The context of reception varies, in part, because the labor market in communities of settlement are so variable. According to segmented labor market theory, developed urban economies rely on the low-wage labor of immigrants to provide services and meet the needs of the primary labor market. Such a secondary labor market provides lower compensation, less permanent employment and, in some cases, riskier working conditions (Piore 1979; Orrenius and Zavodny 2009). Immigrants in the same community of settlement who work in different sectors of the labor market can, in turn have very different assimilation trajectories (Phalet and Heath 2011; Venturini and Villosio 2008). And, many immigrants face lower returns to their education in the labor market, creating low earnings trajectories.

Economic returns also vary by location of schooling. Immigrants in the United States are more likely to reach earnings parity with natives if they received the majority of their schooling in the United States (i.e. the 1.5 generation) (Bratsberg and Ragan 2002). Jobs that require certification in the country of settlement are simply not available to many recent immigrants. Despite high levels of education, even foreign born professionals are often employed in jobs requiring far fewer skills (Akresh 2006). There are exceptions for some immigrants who are able to migrate under employer sponsored visas and enter higher skilled segments of the labor market. Education accrued in Latin America or the Caribbean region appears to be less valued in the US labor market than education from some Asian countries, for example (Akresh 2006, 2007). But overall, a foreign postsecondary degree is associated with lower earnings than a postsecondary degree earned in the country of settlement (Akresh 2006; Zeng and Xie 2004).

Other immigrant characteristics influence earnings. Language proficiency, time in the community of settlement and citizenship status are all associated with immigrant earnings and wealth

accumulation (Allensworth 1997; Bleakley and Chin 2004; Hall and Farkas 2008; Hao 2003). And, there are important gender differences in earnings among immigrants that are related to differences in family formation and labor patterns among men and women. Some women migrate on their own while others are 'tied migrants' who follow spouses or other family members. Female migrants may enter the labor force to assist the family economically but retreat from the labor market to fulfill family roles after the family has settled and become secure in the community of settlement (Duleep 1998). This leads to lower labor force participation rates for some women even with increasing duration in the community of settlement in contrast to the assimilation model. Yet, there are very different reasons for migration and this leads to different labor force participation patterns for women from across national origin groups (Antecol 2000). For example, Filipino women historically recruited to work in the health field in the United States, had relatively rates of high labor force participation in comparison to women from other national origins. The different selection of migration as well as differential labor market opportunities across countries also help explain differential participation rates for women in diverse receiving contexts in Europe (Rendall et al. 2010).

Assimilation theory predicts that, as time passes, immigrants' earnings come to resemble those of their native counterparts as they accrue experience in the community of settlement's labor market. In the United States, the wages of European origin immigrants appeared to catch up to those of their native counterparts (Chiswick 1978) but there is considerable heterogeneity in the wage assimilation among immigrants today. There are differential economic outcomes for immigrants from some minority groups even when adjustments for lower stores of human capital are made (Hall and Farkas 2008; Oh and Min 2011). Thus, immigrants face similar wage penalties based on race as natives in the United States suggesting a strong segmented assimilation dynamic may be occurring. Non-white immigrants appear to face a wage penalty when there are more immigrants in their metropolitan area in the United States (Stewart and Dixon 2010). Similar wage differentials by origins are evident in European countries as well (Sarvimaki 2011; Venturini and Villosio 2008). Thus, a uniform pattern of structural assimilation in the first generation is not apparent among more recent waves of immigrants across diverse contexts of settlement.

Employment and Earnings Among the Second and Later Generations

Just as with education, studies seeking to understand patterns of economic assimilation have looked to the second generation (Portes and Zhou 1993; Waldinger and Feliciano 2004). And, just as with educational attainment, researchers ask whether some in the second generation encounter barriers in the labor market that are different to those experienced by others? On the one hand, the question of labor market success for the second generation may be based on the same status attainment models that predict economic success driven by parental human capital and parental investment in children's education and credentials (Alba and Nee 2003; Hernandez et al. 2011; White and Glick 2009). The optimistic version of this argument points to the high aspirations of immigrant parents and educational progress for some in the second generation to predict upward intergenerational economic mobility (Farley and Alba 2002; Kao and Tienda 1998; Hirschman 2001; Park and Myers 2010). On the other hand, the segmented assimilation theory predicts structural barriers to economic attainment for many in the second generation. Gans (1992), for example, posited that children of immigrants from historically disadvantaged racial/ethnic origins would face the same discrimination in the labor market as other minority youth in the United States. These minority children of immigrants would find themselves consigned to the secondary labor market but be less willing to take on the low-wage jobs of their immigrant parents. Portes and Rumbaut (2001) predicted poorer outcomes

as the second generation faced a labor market that only provided jobs at the high and low end with fewer opportunities for workers in the middle.

Research findings on the economic assimilation of the second generation in the United States often focus on young adults because these are the offspring of the more recent (i.e. post 1965) immigrant cohorts. Results of these investigations indicate fairly positive economic outcomes for the second generation. For example, Waldinger and Feliciano (2004) note that employment levels among Mexican second generation men were comparable to those among similarly educated non-Hispanic whites. Among women, employment rises in the second generation. Alba and Nee (2003) also point to higher than expected employment gains among some second generation adults. Where the immigrant generation dominated in low level jobs in the service sector, second generation adults were more likely to move into professional sectors of the labor market (Alba and Nee 2003). But even where upward mobility is evident overall in the United States for the second generation, racial and ethnic inequality in wages persists.

Although the theoretical framework was originally designed as a way to describe non-linear patterns of attainment among immigrants and their descendants in the United States, there is some evidence of a segmented pattern of assimilation in non-US contexts as well. The second generation sees greater economic returns to their education than the first generation across European destination countries (Pichler 2011). But, in several parts of Europe, the groups that lag behind in education also face higher levels of unemployment and greater participation in unskilled jobs when compared to other native-born youth. Immigrants to European states from non-EU member countries and their offspring are constrained to lower wage jobs and have higher rates of unemployment than natives or immigrants from elsewhere within Europe (Silberman et al. 2007; Kalter 2011). For example, second generation individuals of Turkish descent have higher rates of unemployment and low wage employment when compared to other native born Germans (Worbs 2003).

Residential Integration

Residential patterns have represented a key component of understanding the structural incorporation of new immigrants and their descendants. In the earliest formulations of assimilation theory, scholars from the Chicago School observed how immigrant groups from Europe adjusted to life in the United States. Though their definition of assimilation seems synonymous with acculturation, Park and Burgess later offer an ecological model of assimilation that explains how successive immigrant generations would spatially locate further and further away from their original settlement near the central business district (1925). Ultimately, the 3rd or 4th generation would eventually make it to the suburban "commuters' zone" which denotes full assimilation into American life. Park and Burgess were not explicit in defining the residents of the commuters' zone to whom the immigrant generations assimilated. However, it is implied that the target population to whom to assimilate functioned along the lines of Anglo-conformity.

The traditional spatial assimilation theory relies on several presumptions: (1) The assimilation process is defined to occur within an urban or metropolitan area rather than across metropolitan areas. (2) The urban area is conventionally organized with the more urbanized areas (closer to the central business district and more densely populated) containing ethnic enclaves and poorer neighborhoods while the suburban areas are more socioeconomically affluent in its residents and amenities. (3) Immigrants arrive to the U.S. with lower socioeconomic status than U.S.-born residents which necessarily constrains immigrants to initially settle in urban ethnic enclaves. And lastly, (4) The assimilation process of immigrant generations occurred in a linear, straight-line progression with each successive generation achieving greater integration into the mainstream society. Certainly, at the height of Chicago School

research, this initial immigrant residential settlement pattern was repeatedly observed for many European immigrant groups. But, just as with other structural assimilation outcomes, new immigrants and new immigrant destinations raises questions about the uniformity of residential integration across groups.

For many European immigrant groups who arrived at the turn of the twentieth century, spatial assimilation occurred through the generations (Lieberson 1963). However, in the post-1965 era of immigration, other theoretical perspectives are articulated to offer alternative approaches to immigrant residential settlement patterns. The spatial assimilation model is still most often utilized to understand the residential patterns of immigrants and their children. However, the assumptions of the original model may not apply in the current context in several ways. First, many studies of immigrant residential settlement and mobility have extended the spatial assimilation theory to apply across metropolitan areas. Second, just as with the changes to theory predicting educational and economic incorporation, spatial assimilation models have come to account for the fact that immigrants in the US context in the latter half of the twentieth century are tremendously diverse racially, socioeconomically, and by immigration status (e.g. green-card holders, refugees/asylees, temporary visa holders, undocumented immigrants). Because of this diversity, it can no longer be assumed that immigrants will initially settle in urban ethnic enclaves. Third, immigrants are increasingly moving to non-traditional gateways which have very little experience with immigrants and institutional support for their integration. Also, these new immigrant destinations are more likely to be smaller metropolitan areas, suburban, or rural areas (Lichter et al. 2010).

During the 1960s and 1970s, the theoretical perspective of ethnic disadvantage arose in the midst of increasing disenchantment with assimilation theory that hypothesized the eventual fading of ethnic distinctions. Milton Gordon (1964) makes a distinction between acculturation and structural assimilation and more importantly, he argued that one did not necessarily happen with the other, especially for certain groups. Perhaps the most poignant work during this historical time period was Glazer and Moynihan (1970) who discuss how discrimination persists along ethnic lines, particularly for African Americans. In fact, they suggest that housing and residential settlement is the "greatest and most important remaining area of discrimination—important in its extent, its real consequences, and its social and psychological impact" (1970, p. 53). An offshoot of the ethnic disadvantage theory in the residential segregation literature is termed *place stratification* which focuses on housing discrimination and barriers to residential mobility (Logan and Molotch 1987; Massey and Denton 1993; Yinger 1995; Charles 2003). Most often, the place stratification model has been applied to African Americans and their residential patterns, but the basic tenants of discrimination and white avoidance (Farley et al. 1994) has been extended to describe the residential patterns of other ethnic groups along with various immigrant groups (Iceland 2009).

Lastly, segmented assimilation which posits that the process of assimilation may work differently for different immigrant groups based on their individual characteristics, the resources of their co-ethnic community, and structural-level factors also contributes to understanding current residential patterns (Portes and Zhou 1993). Acculturation does not necessarily yield positive structural assimilation outcomes for some immigrants while selective acculturation for others is highly beneficial. Therefore, according to this theory, residential integration for immigrant groups is varied as their initial residential settlement ranges "from affluent middle-class suburbs to impoverished inner-city ghettos, and that "becoming American" may not always be an advantage for the immigrants themselves or for their children" (Iceland and Scopilliti 2008, p. 81). In other words, some immigrants and their children are continually be segregated from non-Hispanic whites while others experience greater spatial assimilation.

Findings have largely been consistent across most studies showing that residential segregation for immigrants is moderately higher than for their native-born counterparts within racial-

ethnic groups in the United States (Iceland and Scopilliti 2008). Other researchers have conceptualized spatial assimilation as locational attainment or the movement into suburbs (Alba and Logan 1991, 1993) and they also find evidence of spatial assimilation. Secondly, those with higher socioeconomic status and greater English proficiency are less segregated than those with lower socioeconomic status (Clark 2007; Iceland and Wilkes 2006; South et al. 2005a, b). Thirdly, the length of residence in the host country is also an important factor in determining spatial assimilation (Iceland and Scopilliti 2008). Generally, those ethnic or ancestry groups that have been in the U.S. longer are less segregated than those groups that arrived more recently (White and Glick 1999; Jones 2003).

There is also some evidence of place stratification for some immigrant groups in the United States, particularly for black immigrants from the Caribbean (Denton and Massey 1989; Crowder 1999). Iceland and Scopilliti (2008) show that black immigrants have the highest level of segregation than their native-born counterparts or any other immigrant group. This is especially troubling given that black immigrants generally have higher socioeconomic status than U.S.-born blacks and that controlling for socioeconomic status, the higher segregation of black immigrants persist. It may certainly be the case that race turns out to be more salient for some groups than others consistent with a 'segmented' pattern of residential assimilation.

Starting in the 1980s and accelerating in the 1990s, immigrants have been leaving or bypassing all together the long-established gateways for new destinations. This dispersion of immigrants to places with very little history and contact with immigrants is discussed in detail below, however, in light of this, researchers have questioned whether residential integration works differently in new destinations. Park and Iceland (2011) find that immigrant segregation is higher in established metropolitan gateways than in new metropolitan destinations. However, segregation in new destinations has increased at a faster rate than established gateways during the 1990s and for Hispanics, spatial assimilation is not as strongly evident in new destinations than in established gateways. It remains to be seen if spatial integration will proceed slower or not at all in new destinations. In fact, if the definition of new destinations is broadened to include suburban and rural areas, Lichter et al. (2010) found that segregation is higher for Hispanics in new destinations than in established gateways. There has been far less research on residential assimilation in Europe and other parts of the world experiencing increasing immigration. Safi (2009) finds evidence of residential assimilation on the part of immigrants to France from other parts of Europe. But, as in the United States, there is more mixed evidence of spatial integration among immigrants from Africa. The persistence of racial segregation clearly influences the opportunities for residential mobility in many immigrant destinations.

New Immigrant Destinations/ Communities of Settlement

From the 1960s to much of the 1980s, the majority of new immigrants settled into established gateways in a handful of states including California, New York, New Jersey, Texas, Florida, and Illinois. These states are still home to the majority of immigrants but their share of the immigrant population declined for the first time during the 1990s. A shift began to occur in the 1980s where the immigrant population in other states and metropolitan areas began to rapidly increase and this growth continued in the 1990s. Metropolitan areas like Atlanta, Phoenix, and Las Vegas experienced a doubling of their immigrant population between 1980 and 2000 (Singer 2004). The emergence and growth of these new immigrant destinations poses new opportunities and possible challenges for immigrants as well as local communities, government, and institutions. The continual dispersion of immigrants to more places across the country calls into question whether the immigrant assimilation patterns and theoretical

assertions from the past will continue to hold in the twenty-first century.

Researchers explain that the emergence of new destinations is mainly due to pivotal policies and economic conditions during the 1980s and 1990s simultaneously at both the national level and specifically in California (Durand et al. 2000; Massey et al. 2002).[1] The context of reception in established gateways may have become less welcoming or attractive to immigrants, but the long history of immigration to these places yields certain patterns of immigrant assimilation. Massey (2008) explains that established gateways have acted as "assimilation machines" for the rest of the nation. He states that "gateway cities thus served as buffers between the masses of immigrants and the rest of American society, easing their entry so that most natives never encountered relatively unassimilated, monolingual, and culturally foreign immigrants..." (2008, p. 352). However, the geographic dispersion of immigrants beyond these gateways removes this buffer and many communities that have never had experience with new immigrants now have to decide if and how integration will occur within their community.

Simultaneously, immigrants in these new destinations will not have the assistance of longer-settled immigrants to "learn the ropes" nor an abundance of institutional resources to help them integrate. In other words, these new-destination communities may not be prepared socially or institutionally to integrate immigrants in the same ways established gateways have done for decades (Massey 2008). Waters and Jiménez (2005) also suggest that the new destinations' context of reception may fundamentally differ from that of the established gateways which may in turn alter patterns of immigrant assimilation. They discuss how new destinations may lack the institutional arrangements found in established gateways to aid immigrants navigate the social, medical, legal, or linguistic services offered within the community. Integration or assimilation therefore may be more difficult for immigrants in new destinations. But there is considerably less research on the structural assimilation of the second generation in these communities leaving questions of the persistence of these patterns across generations.

Second, because the paths of assimilation have not yet been firmly paved in new destinations, immigrants may have more leeway to define their position in "the class, racial, and ethnic hierarchies" (p. 117) within their new communities. With a focus on the immigrants who migrate and settle in new destinations rather than on the context of reception within them, some researchers assert that these immigrants have accumulated sufficient social capital to readily navigate life in a new setting (Hernández-León and Zúñiga 2003). Several of the case studies in Zúñiga and Hernández-León's edited volume (2005) also support this perspective. Immigrants may be new to an area but their familiarity with American institutions and practices allows them to integrate residentially, economically, and socially soon after their arrival. In other words, the assimilation of immigrants is not solely dependent on the context of reception but also on the agency of immigrants themselves. It is not only the "assimilation machines" that cultivate integration of new immigrants into mainstream society but also the immigrants who are "quite capable of envisioning and negotiating a future for themselves and their children..." (Zúñiga and Hernández-León 2005, p. xxvii).

As mentioned in the previous section on residential settlement and integration, new immigrants in the twentieth-century were largely thought to initially settle in the urban cores of cities. However, Singer et al. (2008) show that immigrants are not only settling in new destinations but they are also settling into the suburban parts of these places. Even the newly-

[1] The 1986 Immigration Reform and Control Act (IRCA) at the national level and Proposition 1987 in California pushed Mexican immigrants away from settlement in California. During the same time, California was experiencing a deep economic recession while other areas in the country were experiencing growth in low-skill jobs (Gouveia and Saenz 2000; Johnson et al. 1999).

arrived immigrants are settling directly in suburban areas which directly contradict Park and Burgess's ecological model of assimilation. The increasing suburban settlement of immigrants raises new questions for assimilation and whether the suburbs will continue to be a space of more opportunities for integration or a new space of isolation and segregation (Singer et al. 2008).

In an economic and political climate where open hostility toward immigrants readily abounds in many new destinations across the United States, it remains to be seen if new destinations will continually develop and grow. As the number of low-skilled jobs shrinks in many parts of the country and during a time of economic downturn, some argue that immigration to the U.S. may slow down significantly and many immigrants in new destinations may seek refuge in established gateways with co-ethnic family and friends. For example, the size of the Mexican immigrant population decreased substantially in key metropolitan labor markets. This decrease is magnified even further in locations where localized immigration enforcement was also particularly visible (Parrado 2012).

Conclusion

Regardless of the variant used, theoretical frameworks of assimilation look to understand how new arrivals shape and are shaped by the communities in which they settle. In the classic story, migrants, often motivated by desires for upward economic mobility, work hard to achieve better lives for themselves and their descendants. But the extent to which immigrants are able to 'assimilate' into their new communities of settlement clearly depends on many factors. These include the forces that shape the selection of migrants from their origins in the first place. And, it includes the forces that shape the opportunities for the integration and involvement of immigrants and their descendants into the education, labor and residential systems of the communities in which they settle. Theoretical expectations about the assimilation of new arrivals in each of these realms were originally based on the experiences of European migrants at one particular historical era to one particular location – The United States. The considerable increase in the volume of global international migration, the diversity of migrant origins and the variety of geopolitical settings in which migrants settle raises significant questions about the applicability of one model of assimilation.

Certainly many factors shape the assimilation prospects for immigrants and their descendants. Individual traits aside, international and domestic policies create the opportunities and barriers facing immigrants in the first place. If citizenship is denied migrants or their offspring then it seems unlikely that full economic, social or cultural incorporation would follow. Likewise, barriers to attainment in the form of limited access to social welfare, educational and economic opportunities as well as residential segregation limit the full incorporation of some groups regardless of their own motivations and aspirations.

Yet, in spite of these many structural features, immigration continues and many immigrants achieve remarkable success in their new communities. Children of immigrants from diverse origins living in countries across North America and Europe appear to be keeping up with, and in some cases surpassing, the educational and economic successes of their higher order generation peers. In other words, there may not be a one size fits all theoretical perspective that can capture the complexity of assimilation but there is as much reason to be optimistic about the future of structural incorporation even in the messy modern era of migration.

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Economic Impacts of Migrant Remittances

24

J. Edward Taylor and Michael Castelhano

Introduction

Migrant remittances and their impacts are among the most studied topics in the social sciences. They are also often mis-studied. The primary goal of this chapter is to provide an empirical framework to analyze migrant remittances and their economic impacts. While doing this we critically review selected works in the remittances-and-development literature, although our intent is not to offer a comprehensive literature review.

There are several reasons why remittances have inspired so much research. The magnitude of remittances is one. The World Bank estimates that international migrant remittances totaled US $483 billion in 2011. The flow of remittances from rich to poor countries substantially exceeds the flow of aid, which totaled $128.7 billion in 2010, despite being a record year.[1] This figure vastly understates migrant remittances, because the overwhelming majority of migration is internal, and unlike international migrant remittances there is no established procedure to track internal remittances.

Another reason for the research interest in remittances is the potential for remittances to shape social welfare outcomes in migrant-sending countries. Migrant remittances represent a large share of total gross national product in a number of countries, and they constitute a considerably larger share in the regions within countries from which the migrants originate. Designing policies to limit migration is no longer a serious goal inspiring migration research, but interest in policies to influence remittances and their impacts on the economy is alive and well.

Researchers and policymakers have long recognized that remittances have indirect effects, both positive and negative, on migrant-source economies. Much of the migration literature consists of efforts to test for, and quantify, the impacts of remittances on an array of outcomes, from physical capital investments to crop production, poverty, inequality, and schooling.

There can be no migrant remittances without migration, and family members' participation in migration, like remittances, has complex effects

[1] For world remittances, see: Dalip Ratha, Worldwide Remittance Flows updated to $483 billion for 2011. http://blogs.worldbank.org/peoplemove/worldwide-remittance-flows-updated-to-483-billion-for-2011. Aid data are from OECD's Development Co-operation Directorate, "Development aid reaches an historic high in 2010." http://www.oecd.org/document/35/0,3746,en_2649_34447_47515235_1_1_1_1,00.html

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_24

on migrant-sending economies. This is the key feature that differentiates remittances from unconditional public transfer: remittances come with strings attached. Some migration effects reinforce the impacts of remittances, but others do the opposite. Migration forges links between migrant origin and destination economies, and remittances are one way in which economic growth at the destination impacts the origin. Analytically, the impacts of remittances cannot be studied in isolation of migration decisions, because many of the same variables, observed and unobserved, influence both migration and remittances. The major single challenge in quantitative research on remittances and their impacts is disentangling the two.

Research on remittances, like migration, tends to be framed by competing hypotheses. Some researchers suggest that migration competes with local production for scarce human resources, and remittances fail to compensate for this while creating a situation of dependency. Others suggest that remittances, like other transfers, can be leveraged to stimulate development, for example, by loosening production constraints while providing cash and income stability to large numbers of households in the developing world. One view is that remittances target many low-income rural households and provide a major source of development funding that does not depend on taxing domestic urban or developed-country populations. However, the selectivity of migration and thus targeting of remittances is more complex than this, and the non-randomness of remittance transfers creates serious challenges to statistical identification for social science researchers.

To appreciate the challenges in studying remittance impacts given the selection problem, we can start by imagining a situation in which the problem does not exist, and then ask how this situation differs from the reality that we face, what these differences mean for our estimated remittance impacts, and what steps must be taken to obtain better estimates.

The Idealized Remittance Experiment

The ideal way to circumvent the statistical issues associated with selection is to use experimental data, in which we have randomized the decisions for participants. Obviously randomized migration would be unethical, but we can use the idea to construct a thought experiment that will help us think about these difficulties. Comparing the differences between our thought experiment and the real world can help illustrate the problems that we face.

Migration thought experiments have been talked about before (Lopez-Feldman and Taylor 2010; Yang 2008; Mckenzie and Yang 2010), but not always with an eye on the impact of remittances. In real life, both migration and remittances normally are nonrandom, and controlling for self-selection in one does not resolve the bias we face from nonrandom selection in the other. The factors shaping migration also shape the distribution of remittances and their potential impacts. This is what makes studying remittance impacts so complicated.

To begin the experiment, we identify an economy of interest. Depending on our goals this could be a household, village, region or something bigger. From this population of interest we would randomly select agents to receive the "remittance treatment," and measure outcomes of interest before and after the treatment. The random selection would allow us to avoid the complicated statistical issues that arise from selection bias. There are many possible outcomes of interest. Some examples of outcomes analyzed in the migration literature include: income; children's educational attainment; the productivity of agricultural land; labor force participation; and investment in small businesses.

A complication with examining remittances is that we need a compound experiment. First we need to randomly select people into migration. Randomizing migration would eliminate migration selection bias when modeling remittance impacts. Nevertheless, even with randomly selected migrants, who remits and how much they remit are not likely to be random. From among the migrants, we would need to randomly select whether and how much each migrant remits back home. Only then would we be able to treat remittances as exogenous in our remittance-impact study. The amount remitted for each migrant could be drawn from a bounded

distribution covering the range of reasonable expected remittance amounts.

This effectively would give us two treatments, and so two treatment groups. The full treatment group would be the households that send a migrant and receive remittances of some random amount. We'd also have a partial treatment group composed of households who send migrants but do not receive remittances. Finally, we'd have a control group consisting of households that neither send a migrant nor receive remittances.

Another important consideration is the length of the treatment. In most experiments, treatments occur over short time periods. With migration and remittances the treatment as well as its impacts may take a long time to materialize. If we choose too short of a time frame, we might not observe the true effects of remittances because they may not have occurred yet—the migrant might still be struggling to become established in the host labor market, or the remittances sent home may not be enough yet to make productive investments or cause changes in household expenditure or labor supply patterns. The impact of remittances may be nonlinear, as well. The impact of the first dollar remitted (or remittances in the short run) might not be the same as that of the 5000th dollar (or remittances in the long run).

For our hypothetical thought experiment, we could simply randomize the total amount of remittances a household receives over a given time period of time and distribute it to the households from which we have randomly extracted migrants.

After the remittances are channeled into the migrant-sending economy, we again measure the outcome of interest. Using measures from the treatment groups (migration, migration-and-remittances) and control groups (migration-but-no-remittances, no-migration), we could use a simple regression approach to evaluate the marginal impact of remittances ($R_i \geq 0$) on whatever outcome in person i's household (Y_i) we wished to study, independent of the impacts of migration by person i ($M_i = 1$). The marginal impact of remittances, conditional on (random) migration, would be given by ρ_R in:

$$Y_i = \beta_R + \rho_R R_i + e_{Ri} \quad for \quad M_i = 1$$

The average impact of migration, independent of remittances, would be given by ρ_M:

$$Y_i = \beta_M + \rho_M M_i + e_{Mi} \quad for \quad R_i = 0$$

The expected impact of migration including remittances would be:

$$\rho_M + \rho_R R_i$$

In theory, ρ_M and ρ_R could either be positive or negative. Our outcomes of interest might also depend on other characteristics of individuals or households. However, in our randomized thought experiment, migration and remittances would not be correlated with these variables, and so in theory simple ordinary least squares regressions like the ones above would give unbiased estimates of migration and remittance effects.

Getting Real

It might seem unrealistic to randomize migration, but it is not inconceivable. In fact, there is one notable example in the literature involving the randomization of migration. Many countries use some kind of visa lottery to determine which applicants get a visa. New Zealand's Recognized Seasonal Employee program is unique in that it selects from a relatively small population (the Tonga Islands) to give access to a relatively profitable migration work opportunity. This is probably the closest to a randomized migration experiment that we will ever see. Another example of randomized migration is the Diversity Visa program in the United States. This program selects about 50,000 recipients from a pool of 13 million or more applicants from all over the world, though applicants are self-selected from their countries' populations.

In real life, both migration itself and remittances given migration are highly selective. Thus, the remittance treatment is endogenous. Because of sample-selection bias, the treatments ρ_M, ρ_R are correlated with the error, u. The effects of omitted (including unobservable)

variables influencing migration and remittances fall into the error. In order for ordinary least squares estimation to be unbiased, it generally must be the case that the treatment is independent of the error, that is, $E(\rho u) = 0$. This is highly unlikely given that households and individuals make their own migration and remittance decisions. Our randomized thought experiment artificially takes these decisions out of the hands of the household or individual. Randomization breaks the correlation between treatment and error.

How does this fictitious experiment, in which we use simple observations to evaluate the impacts of remittances, differ from the real world? The first difference is that migrants are not randomly selected from the sending-area population. Variables, both observable and unobservable, may influence migration as well as its impacts. The process by which migrants are selected has been extensively studied, with conclusions varying by origin, destination and time. These issues will not be discussed here except insofar as they relate to identification problems in the study of remittance impacts.

The second difference is that, once an individual has migrated, the remittances we observe are also endogenous. They depend on individual choices by migrants, and they are likely influenced by migrants' households of origin, as well. In the Tonga Island study, even though a random process determines who migrated, there is nothing random about remittances given migration. In fact, correcting for endogenous remittances in that case is particularly challenging, because the participants in this lottery all come from the same very small island country, so we cannot exploit variation in origin areas to help identify remittance effects or learn about how this might determine or interact with the impacts of remittances.

Randomized migration is extremely rare, and randomized remittances given migration are unheard of. Even with a random migration experiment, the decision to remit and how much to remit almost certainly are shaped by the characteristics of both migrants and the households left behind.

To take an example, consider the impact of remittances on schooling. Educational attainment is thought to be correlated with unobservable factors, particularly ability. Migrants from households with high ability children may be more inclined to remit and/or to remit more. Attempts to measure the impact of remittances on educational attainment could then be confounded by the differences in ability between remittance recipients and non-recipients. In this case, if remittance receipt and ability are positively correlated, we may over-estimate the impact of remittances on educational attainment by confusing it with ability. Similar concerns would arise while attempting to estimate the impacts of remittances on other outcomes influenced by ability.

Identification Strategies to Test Remittance Impacts

Without recourse to remittance experiments, researchers rely on a suite of econometric and other quantitative tools to attempt to identify remittance impacts while addressing the potential biases outlined above. Below is a catalog of the most important identification strategies used in remittance impact studies, with empirical examples of each.

Instrumental Variables

It is common practice to instrument for migration and/or remittances. Instrumental variable (IV) methods are the most common identification strategy to address the potential endogeneity of the "remittance treatment." Instrumental variable techniques are useful but subject to an array of challenges researchers need to be aware of. The appropriateness of instruments may vary depending on what variable of interest is being evaluated. For example, destination wages may be uncorrelated with home production outcomes. However, they may be correlated with educational outcomes, by changing the optimal level

of education for those planning to migrate in the future.

To be valid, instruments must not be correlated with the outcome variable in any way except through the variable they instrument. A valid exclusion restriction is hard to come up with in many cases, but it is a necessary characteristic of any instrumental variable.

A promising source of instruments for remittances is migrant-destination characteristics. Unemployment rates, wages, and growth in sectors where migrants tend to concentrate are all examples. For this to be an effective instrument, there has to be some variation in destination among the study population, and we have to have access to data on changes in destination characteristics once migrants are at their destinations. The destination characteristics themselves must be exogenous to migration—that is, they cannot be shaped by migration.

Here's the ideal scenario: First, we observe migration, with different people migrating to different destinations. That is, destination choice is predetermined. It is endogenous, though, and variables, both seen and unseen, that influenced destination choice also could influence remittances and their impacts. Thus, we need additional exogenous information to identify remittance effects.

This is where changes in destination variables can come into play. After migration has occurred, we observe some kind of exogenous shock at the migrant destination. It could be an economic shock (see Yang 2008 below), a sort of quasi-experiment. If the shock negatively affects migrant incomes, and remittances increase with income, we would expect to see a decrease in remittances. With before-and-after data on remittances, we could test this. Then we could estimate the impact of the decrease in remittances (instrumented by the destination shock), or the destination shock itself, on outcomes of interest. A critical assumption here is that, whatever the destination shock is, it affects the outcome of interest only through remittances. This is known as the exclusion restriction: The shock can legitimately be excluded from the outcome equation.

Dean Yang (2008) exploited the Asian financial crisis in his study of remittance impacts in the Philippines. The crisis provided a source of exogenous variation in exchange rates, which in turn were used as instruments for remittances. Philippine migrants, even from the same households, went to different countries prior to the crisis. The crisis affected exchange rates differently in different countries. Exchange rates transform remittances from foreign to local currency. Thus, we have a close-to-random remittance experiment: The economic shock had different effects on different Philippine households, depending upon which countries the households' migrants were located in at the time the shock hit. What makes this "quasi experiment" possible is that these were unexpected economic changes that occurred after migrants were abroad. The crisis and variation in remittance impacts it produced, therefore, could not have played a role in the migration decisions to begin with. The exclusion restriction appears to apply: The exchange-rate shocks should only affect Philippine household outcomes via remittances.

Amuedo-Dorantes and Pozo (2010) used a similar type of identification strategy to study the impact of remittances on child school enrollment in the Dominican Republic. Migrants from the Dominican Republic went to a variety of different destinations within the United States, and many remitted to households other than their household of origin. Once migration occurs, it can be argued, the variation in unemployment rates and average earnings across states affects schooling choices back home only through its effect on remittances. The economic changes in the states to which individuals had migrated are used as instruments in a linear probability model to evaluate the impact of remittance receipt on the likelihood of children staying in school.

In another twist on this strategy, Amuedo-Dorantes and Pozo (2006) focus on transaction costs of remitting. Many migrants remit through Western Union offices. The distribution of Western Union offices in destination states, lagged one year, is used as an instrument for the costs of remitting. These remittance transaction costs

should be exogenous to household decisions in the origin yet correlated with the amount of remittances sent home by migrants.

In all three of these studies, post-migration *changes* in destination characteristics are used as instruments for remittances. Some studies use destination characteristics, not changes in these characteristics after migration, to try to instrument for remittances. In general, this is not a good idea, because differences in destination characteristics are likely to explain migration choices in the first place as well as remittances given migration. If traditional networks hold sway over migration decisions, the use of destination characteristics could also reflect differences in origin-community characteristics associated with the creation of networks, as well (Amuedo-Dorantes and Pozo 2010, 2011).

A key to using IVs to identify the impacts of remittances as opposed to migration is to find exogenous variables correlated with remittance amounts but not the decision to migrate. In our idealized thought experiment above, since both migration and remittances are randomized, we can separate these effects easily. In the real world, of course, isolating migration and remittance impacts is difficult.

Relationships between the source area and the destination have been used as instruments for migration and remittances. Adams and Page (2005) evaluate the impact of migration and remittances on poverty using such a strategy. They use distance between the sending areas and the destinations to which people migrate as an instrument. This distance is found to be negatively related to both the amount of migration and remittances. A negative relationship between distance and the propensity to migrate has been documented in the literature, but the relationship between distance and remittances is less clear-cut. The exclusion restriction might be difficult to argue here. Factors like international trade (e.g., between Mexico and the United States) could impact poverty and be correlated with proximity to the border.

Destination or origin characteristics can be interacted with household characteristics (Adams and Cuecuecha 2010; Amuedo-Dorantes and Pozo 2006; Hanson and Woodruff 2003) to produce instruments. This allows for more variation across individuals or households where destinations or relationships between source and destination-area characteristics are similar.

In short, carefully selected instruments can help circumvent self-selection problems with regard to migration or remittances. However, excluding one or more exogenous variable from the equation that determines the outcome of interest is often difficult to defend. For example, if migration involves a calculus in which potential remittances are compared with the income someone would earn by staying on the farm in the origin, then the same variables that "explain" remittances also explain the migration decision. Isolating migration and remittance effects is a perennial challenge. It is difficult to find exogenous variables that explain either (a) migration but not remittances or (b) remittances but not migration, and on top of this can be excluded from the outcome equation.

Selection Models

Instead of using exogenous variation in some other factor to try to identify the impact of a potentially endogenous variable, selection models use available information to try to predict the probability of observing a censored variable (such as remittances, where many observations contribute values of 0, i.e. no remittance) and use that probability to correct for the bias that would otherwise exist when measuring the impact. A challenge with using selection models is that we need to be able to explain the result of the first stage decision (whether or not to remit in this case) using observable variables.

Amuedo-Dorantes and Pozo (2011) use a tobit model to predict remittance receipt for households from the ENIGH surveys to model healthcare expenditures in Mexican households. This is a particularly challenging task, since both remittances and healthcare expenditures are subject to selection and truncation. They first model remittance receipt using a tobit to account for the large number of zeros. Identification in this model requires having some exogenous variable

that explains remittances but can be excluded from the healthcare expenditure equation. This study uses two instruments for remittances: distance to the border from the capital of the Mexican home state by road, and wages in the migrant destination state in the United States. A state-level migration network variable is constructed using Mexico Migration Project (MMP) data, which may be problematic given the MMP's non-random sampling of villages. This identification strategy rests on the exclusion restriction that distance, wages, and state migration networks do not directly influence healthcare expenditures.

While the tobit is a restrictive model, the authors are unable to find an exclusion restriction that would allow the use of a less restrictive selection model (such as a Heckman model). An informal test that consists of comparing the first stage coefficients of the tobit to those of a probit for remittance receipt satisfies the authors that the tobit is appropriate. The predicted value of remittances is then used in a two stage maximum likelihood estimation that separately estimates the probability of spending on healthcare and the amount spent given that expenditure occurs.

Rozelle et al. (1999) and Taylor et al. (2003) are among the few studies that attempt to separate out-migration and remittance impacts—in these cases, on agricultural productivity and on total income and its composition, respectively. Their approach is based on a recursive equation system, in which a household's productivity or income result depends on remittances and migration, and remittances in turn depend on migration. Their identification strategy postulates that in addition to human capital variables migration is a function of migration networks, or contacts with villagers who have previously migrated. However, village migration networks should not affect the level of household-specific remittances, which depend upon the household's own migration decisions, nor do they affect household incomes from sources within the village. Remittance behavior is assumed to depend on village norms to remit, proxied by the average level of remittances among families in the village (excluding the observed household). This strategy assumes that remittance behavior by other households affects migrants' remittance level but has no independent effect on household income. The authors include local agricultural shocks as instruments to identify impacts on agricultural productivity.

Using observable variables to predict selection into migration and remittance behavior is probably under-utilized in the literature right now. It is more common to see selection models used in studies of the impacts of migration (for example, see Taylor and Mora 2006) or of the determinants of remittances (see Yunez-Naude and Taylor 2001) than in studies of the impacts of remittances. This lack of use probably relates to the multi-level selection that takes place in migrant remittances, which makes the use of selection models more difficult for remittance impacts. The challenges that exist for using selection models are similar in some ways to those for instrumental variables; exclusion restrictions are a common 'hard to argue' issue with either method, though the arguments are slightly different. There are some types of selection models that do not require an exclusion restriction (such as a Tobit) but instead rely on restrictive functional form assumptions.

Panel Methods

Unobservable characteristics of individuals and households invariably influence both migration/remittances and the outcomes we wish to model. This makes identification more challenging. For example, pre-determined migration and destination choices are the basis for some of the identification strategies described earlier. If an unobserved characteristic (say, ability) affects both migrant destination choices and school attendance, a destination income-shock variable might not be a valid instrument to test the effect of remittances on school attendance.

Panel data open the possibility of using fixed-effects (FE) and difference-in-difference models

to net out the effects of time-invariant unobservables. In these models, *changes* in the outcome of interest implicitly or explicitlyare modeled as a function of *changes* in remittances (and other time-varying variables).

Adams uses a panel dataset (originally meant to explore poverty determinants) to relate remittances to asset accumulation in rural Pakistan. By measuring the impact of past remittances on changes in assets, Adams relies on the idea that the possible endogeneity between migration, remittances and investment behavior is captured in time-invariant factors that drop out of the difference-in-difference model used in this study. Lagged remittances can be used to explore whether remittances alleviate constraints imposed by missing or weak credit or insurance markets. Taylor and Wyatt (1996) use this strategy to test for a non-unitary effect of remittances on income and dynamic impacts of remittances on asset accumulation in rural Mexican households. Past migration or remittances may determine current investments, productivity and income.

These approaches, of course, require matched longitudinal data, which are rare. As the availability of panel data sets with migration information expands, fixed-effects methods no doubt will influence the empirical literature on remittance impacts. FE models do not eliminate the endogeneity problem; it is still necessary to control for possible error correlations between changes in remittances and the outcome of interest.

What Have We Learned from Remittance Impact Studies?

The previous section discussed identification strategies used in remittance-impact analysis. In this section, we present some of the key empirical findings that emerge from this literature. We first look at impacts on the remittance-receiving households, then on the total impacts within migrant-sending economies, which include indirect effects on the households that do not receive remittances.

Household Level Impacts

Income

Taylor (1992), Taylor and Wyatt (1996) and Taylor et al. (2003) find evidence that migrant remittances have indirect effects on household incomes, consistent with the new economics of migration hypothesis that they loosen constraints on production. In Mexico, Taylor and Wyatt found that a $1 increase in remittances increased income by $1.85; that is, remittances generated an indirect effect of $.85 per dollar remitted. Taylor and Wyatt (1988) found that the indirect effects of remittances were higher in households with non-tradable (*ejido*) land rights, which are likely to increase the demand for complementary inputs that can be financed by remittances. In China, Taylor, Rozelle, and De Brauw found that each yuan remitted by a migrant is associated with 1.36 yuan of additional crop income, compensating for the loss of scarce family labor to migration.

Healthcare Spending and Health Outcomes

Amuedo-Dorantes and Pozo (2011) conclude that remittances have a statistically significant positive effect on health care expenditures in Mexico. This effect is not large in terms of overall household spending, but it represents about a 50 % increase in healthcare expenditures for the average remittance-receiving household. The impact was larger for high-income households and households lacking health care coverage (through jobs or *Oportunidiades*, a government program). Both income and access to social programs thus interact with migrant remittances in shaping spending outcomes. The authors make an important note at the end of their paper: they have measured remittance impacts on health care expenditures, but exactly what this means for actual health outcomes is difficult to determine.

Hildebrandt et al. (2005) examine the relationship between migration and child health outcomes, specifically birth weight and infant mortality rates, also in Mexico. They find that migration tends to lead to better outcomes in those terms, but that it is also related to lower likelihoods of breastfeeding and vaccination. This study focuses on migration, using an instrumental variables strategy based on historic migration rates. However, the authors attempt to differentiate between the wealth effects of migration (remittances) and the information effects that may be present if migrants learn about a wider variety of health practices than those who stay in the sending area. After establishing a connection between migration and health outcomes, they use a set of indexes, one composed of elements relating to household infrastructure (quality of flooring, etc.) as a proxy for wealth, and another constructed from answers to health knowledge questions. They find that both indexes are significant determinants of child health outcomes but explain a small fraction of the total improvement attributed to migration. The connection between remittances and health in this study is tenuous, relying on the existence of a connection between remittances and the wealth index.

While migration and remittances might lead to improvements in some health outcomes, they could also have the opposite effect. Impacts on health outcomes reflect the various tradeoffs that migrant households face. Cash income may increase, but time to care for children may decrease. The relative magnitude of each of these effects is hard to quantify. Hildebrandt et al. (2005), mention that children of migrant households tend to have better outcomes at birth but less positive trends in their infancy. This may be suggestive of tradeoffs between time inputs to child health and purchased inputs to child health. How migration affects the allotment of time to non-market tasks such as home child care is a critical question deserving of more research.

Schooling

Migrant remittances can affect educational outcomes via at least three routes of transmission. The first is via an income effect: Households with remittances can better afford to send their children to school. The second, harder to capture in the short term, involves impacts of remittances on the incentives to go to school. Optimal schooling choices may change based on perceived earnings prospects at migrant destinations, where the economic returns to schooling are almost certainly different than in the sending area. Third, remittance-receiving households usually are households in which at least one member (often the household head) has migrated. This can affect the monitoring of children's school attendance. It also decreases the household's labor pool, possibly shifting work from migrants to children at home and increasing the opportunity cost of attending school. These conflicting influences are extremely difficult to isolate econometrically, even though they are likely to be important to understand from a policy-making and program-design point of view. In general, the best one can hope for is to estimate net effects.

Nonlinearities are also likely to be important. Education is a lumpy investment. Rewards are likely to be highest for completion of levels (primary, secondary) rather than years or months of education. This introduces the possibility that marginal increases in remittances may not significantly affect schooling decisions, but larger increases (enough to offset the costs of a year or more of school attendance) may.

Amuedo Dorantes and Pozo's identification strategy using destination-state unemployment and wage data enable them to disentangle impacts of remittances and migration on children's education in the Dominican Republic. They find that remittance receipt in non-migrant households is associated with a statistically significant increase in the probability of school attendance.[2] When they re-estimate with the whole sample, the coefficient on remittance receipt is negative and not significant. They

[2] These are households that do not have an immediate household member abroad in the United States and so are receiving remittances from more distant family or friends.

further break down the sample of non-migrant households to test how characteristics of children interact with remittances. The benefits of remittances are seen to accrue mostly to secondary school attendance and higher birth-order children more than firstborns.

Acosta (2011) tests for a relationship between remittances and education and child labor using a suite of techniques, including OLS, propensity score matching and instrumental variable methods. In the most basic model a relationship between remittances and education is confirmed, but this effect is not statistically significant in any of the more robust model specifications. Acosta's result that remittances do not seem to lead to greater investments in children's schooling in El Salvador is different than what is found in many studies. So are the circumstances of migration: Migration from El Salvador to the US has roots in political upheaval.

When the sample is divided into gender and age categories, a positive and significant impact of remittance receipt on the schooling of female children is found, but there is no significant effect on male schooling. Acosta also finds that remittance receipt has a significant and negative impact on the likelihood of children participating in the labor market. This result is maintained in all specifications of the model. When there are remittances, older children are more likely to leave school to work in unpaid labor activities, although female children are likely to leave unpaid labor activities and attend school.

Agricultural Productivity

Prospects for positive impacts of remittances on productivity in migrant-sending areas turn on the hypothesis of missing credit and insurance markets as an impetus for migration. If liquidity and/or risk constraints prevent households from making productive investments, sending a migrant out to earn cash may permit the household to boost productivity on the family farm. The productivity impacts, if they materialize, are not likely to be immediate. Indeed, in the short run, the family labor lost to migration may make the family farm less productive, at least in terms of land productivity. Some time may pass before the household accumulates sufficient capital to make productive investments and adjusts in other ways to the lost labor.

Lopez-Feldman and Taylor (2010) do not include a direct measure of remittances in their study of the impacts of migration on household productivity; however their theory is based on households' use of remittances. They test whether or not households that had international migrants in a previous year exhibit different levels of productivity than households that did not. They estimate a two-step model using data from the Mexico National Rural Household Survey (Spanish acronym ENHRUM). In a first stage, the household sample is split into two groups and income equations are estimated for each group, using a Heckman model to control for self-selection. The authors find that households with migrants abroad in a given year earn significantly higher returns on their land in later years than households that did not have a "migration treatment." This relationship holds for the total income, non-remittance income, crop and livestock income, and crop income alone. The impacts vary depending on when the migration occurred. Effects are small after one or two years and peak at 7 to 10 years. This pattern of impacts suggests that the effects of remittances on productivity may take some time to accumulate. If so, studies focusing on the short term are likely to miss many, if not most, of the impacts of remittances.

Rozelle et al.'s (1999) analysis from China found that migration decreases crop yields due to the loss of family labor to migration; however, this effect is offset by increased access to cash provided by remittances. The average direct (lost-labor) plus indirect (remittance) impact of a one-person increase in migration is to decrease crop yield by 14 %. Drawing on Lopez-Feldman and Taylor's work, it may be possible that the negative net effect will attenuate or disappear in the future, although differences in labor markets in China and Mexico may be an important determinant of the smaller positive impact of remittances in rural China.

The remittance-impacts literature generally considers one outcome at a time. However, it is

questionable whether one outcome can be studied in isolation of others. For example, health and education are both components of human capital and are likely to represent joint decisions. In fact, the decision to send children to school might well be part of an inter-temporal strategy to prepare them for migration work: Rural families are well aware that, once their children become schooled, they are likely to migrate. Different variables also interact to shape remittance impacts. The way in which remittances influence educational investments is likely to depend on households' health status, assets (which, among other things, affects children's opportunity cost of attending school), and income. Instead of testing for average remittance impacts on remittance-receiving households, we are likely to learn more from new research that helps us understand differential impacts across households and how to identify them.

Remittances and Poverty: A Micro View

The relationship between poverty and remittances is one of the central points of many discussions of migration. Remittances represent an income source for migrant sending households, although like any income source the exact impacts on the household are up to empirical determination. Migration and remittance impacts on poverty are of particular interest due to the changing composition of the household under migration.

Adams and Page (2005), using their distance instrument, found that both international migration and international migrant remittances correlate with lower levels of poverty. Municipal level data from Mexico is the basis for Lopez-Cordova's (2005) tests of the relationships between the share of households in a municipality that receive remittances and several municipal level measures related to poverty. To avoid concerns of endogeneity, remittance receipt is instrumented with the coefficient of variation of rainfall, and distance from the municipality to Guadalajara. The relationship between remittances and infant mortality is found to be negative, as is that between remittance receipt and literacy. Educational outcomes are mixed, with remittance receipt increasing attendance of 5 year-olds, having no significant effect for 6–14 year olds, and a negative impact on attendance of 15–17 year olds. This is consistent with the hypothesis (argued by Chiquiar and Hanson 2005) that human capital returns are low in the US relative to Mexico, so that children who intend to migrate may have lower optimal levels of education.

Lopez-Cordova (2005) uses a measure of income relative to the minimum wage to define poverty, and finds that remittance receipt has little to no effect on the proportion of households in extreme poverty, but that it has a negative impact on the share of households in (non-extreme) poverty. This result is consistent with the idea that migration, as a costly endeavor, may not be available to the poorest. For those who can afford it, migration and remittances decrease the incidence of poverty.

Using exogenous exchange rate variation of the Asian financial crisis of 1997, Yang and Martinez (2006) show that households in the Philippines whose migrants experience positive shocks to their exchange rates are more likely to remit, and those households are less likely to be impoverished. They find that a ten percent improvement in the exchange rate leads to a 0.6 % decrease in the likelihood of the migrants household being impoverished. In addition to looking at migrant households, they are able to find moderate reductions in poverty for non-migrant households based on regional migrants' exchange rate shocks. In other words, if the average migrant from a region experiences a positive exchange rate shock, both that migrant's household and other households in that region are less likely to be impoverished in the next year. In addition to household characteristics, the authors are also able to control for climate shocks of El Niño weather patterns.

The impacts found are perhaps unsurprising, but the identification is clean. A particular contribution of this study is the ability to identify econometrically some general equilibrium effects of remittances. Although Yang and

Martinez are unable to solidly confirm that remittances increase incomes among non-remittance-receiving households (the coefficients are large and positive but have large standard errors), they do show that this is the case on average, and that decreased costs of sending remittances to a particular region lower the poverty rate of that region for non-migrant households. The decrease in poverty rates is not due to remittances flowing into non-migrant households.

One question that cannot be answered in this study is whether the increase in remittances represents a change in total remittances over the period of migration. If migrants are target earners, the decrease in remittance costs may simply speed up the migration or remittance process. This would still leave us with a positive effect (assuming that migrants who plan to return suffer in some way from being away), but the long term effect on poverty may be smaller than it looks in the short term.

We can take away some key points from this study. Like any income source, migrant remittances have the power to reduce poverty. Whether or not that happens in a particular remittance receiving area is dependent on the characteristics of that area and of the remittance sending area, as well of the households that receive the remittances. In order to send remittances, someone must migrate. The more it costs to migrate, the less likely it is that those who migrate come from the lowest levels of the income distribution, and so the smaller the effect on extreme poverty. The confirmation of some general equilibrium effects is encouraging. It suggests that remittances have the potential to lead to economic growth by creating multipliers in the remittance receiving areas as they percolate through the local or regional economy.

Investments, Assets, and Business Ownership

Adams (1998) uses panel data to analyze the relationship between past remittances and asset stocks in future periods in rural Pakistan, with asset stocks separated into several categories. Remittances from three or five years before are related to current period asset holdings. The study shows that internal migrant remittances, international remittances, and labor income all have different impacts on the accumulation of different types of assets. This study's key finding is that migrant remittances are related to increasing holdings of irrigated farmland, whereas labor income is more likely to lead to accumulation of livestock. This difference between sources of income is hypothesized to be a result of households viewing remittances as transitory income, as well as having a higher propensity to invest transitory remittance income than permanent labor income.

Regardless of the differences between remittances and labor income, an important result of this study is the finding that remittances are connected to increased asset holdings. Remittance use studies had suggested that remittances are mostly used for consumption. Surveys that ask for the direct use of remittances do not inform us of how remittances impact the household economy as a whole. Adams' results confirm that migrant remittances are, at least in some circumstances, correlated with increasing asset holdings.

Debrauw and Rozelle (2008) test the propensity to invest migrant remittances in productive activities with panel data from rural China. They employ a first-difference approach to account for household-specific fixed effects. Their findings indicate that households with migrants are more likely to make consumptive investments, where consumptive investments mostly include housing and durable goods. This relationship holds only for current migrants; the number of return migrants has no significant relationship with any of the types of investment in their study.

While they do not find evidence of increased production, De Brauw and Rozelle's study suggests that the total welfare increase that may result from migration and remittances is one that takes place over time. Even if remittances are used for consumptive investment, they could have productivity impacts over time, for example, by improving family health. These impacts are bound to be missed by studies looking only at the short term.

Woodruff and Zenteno (2007) examine a sample of micro enterprise owners in Mexico, to explore the relationship between migration

networks and asset holdings in micro-enterprises. To establish the link with migration networks, they leverage the fact that many entrepreneurs do not live/operate in the same state where they were born and concentrate their analysis on these individuals. Migration rates in the birth state are used to represent access to remittances or loans from family members or friends who receive remittances. This variable is instrumented for, and it is used alongside migration rates in the current home state in a regression relating these and other factors to asset ownership by micro-entrepreneurs. The results show that migration rates in the birth state are more correlated with capital ownership than migration rates in state of operation. This positive relationship with migration rates goes beyond capital ownership and extends into capital output ratios and profits. The authors ascribe this result to a connection between migrant networks and access to capital. What is not clear is whether liquidity is the result of migration and remittances or whether it facilitates migration.

Overall, due to a rather thin empirical research record, it is difficult to reach reliable conclusions about the impact of migrant remittances on investment and entrepreneurialism. Under some circumstances remittances appear to increase investment in productive capital, while under others they do not seem to have such an effect. The circumstances under which each happens may be important in determining of the impacts of migrant remittances. For instance, if migration-induced labor-supply shifts raise wages in sending areas, this could dampen incentives to invest in activities requiring large amounts of labor. If so, we might expect to see more investment in areas with greater integration with outside labor markets.

Aggregate Impacts

The empirical literature on aggregate impacts of remittances in migrant-sending areas falls broadly into two rubrics. One explicitly considers the indirect effects on non-remittance-receiving households, while the other does not. Most studies of remittances, inequality, and poverty fall in the second group.

Poverty

Adams and Page (2005) study the relationship between poverty and migration and remittances in developing countries. They estimate a growth poverty model with data from 71 low and middle income countries at various points in time. A variety of specifications are estimated, all suggesting that migration and remittances are related to decreased levels of poverty. Comparing estimates from an OLS specification to those from an instrumental variables model they find that OLS underestimates the impact of both migration and remittances on poverty rates in the sending country. They point out that the difference between the two sets of estimates implies that migration and remittances may both affect and be influenced by poverty. Overall, they show that a 10 % increase in per-capita remittances corresponds to a 3.5 % decrease in poverty rates. This study's contribution is limited by the fact that each regression includes either migration or remittances; the authors are unable to include both in a single equation. Because of this, it is not possible to say which has a more significant impact, migration or remittances.

Acosta et al. (2008) also find that remittances and migration are correlated with lower rates of poverty in the sending region. They build on the analysis of Adams and Page by using more detailed data on a smaller set of countries, but find similar results, with a 1 percentage point increase in the share of remittances to GDP leading to a 0.37 % decrease in the poverty rate. They compare the results for Latin America in their cross country study to results for 10 Latin American countries using survey micro-data. The results vary depending on the counterfactual that is used for comparison. When the current situation is compared to one with identical migration but zero remittances, they find larger reductions in poverty than in a comparison between the current migration and remittances scenario to one where the migrants stay home. The end result of their household

level analysis is that for each percentage point increase in remittances, the poverty rate in the average Latin American country will fall by about 0.37 %. This is almost identical to the results of their cross country study.

Acosta et al. also report differences across countries in the poverty impact of remittances. The range of impacts for a 10 % increase in the remittance-to-GDP ratio starts at about 0.04 % for poor countries, but goes up to about 0.5 % for richer countries.

Income Inequality

Stark et al. (1986) were the first to use a Gini index decomposition to establish a relationship between remittances and income inequality. They hypothesize a diffusion process. When migration entails high costs and risks, initially, the households that send migrants and receive remittances are likely to be found in the upper segment of the rural income distribution. As remittances flow to these households, inequality increases. However, as migration networks spread, the costs and risks of migration decrease, and remittance impacts become less unequalizing. Using data from rural Mexico, this study finds a negative relationship between remittances and income inequality in a village with a long history of sending migrants abroad but a positive relationship in a village where migration is more recent.

Stark et al. do not account for possible impacts of changes in remittances on non-remittance incomes. Barham and Boucher (1998) construct a counterfactual for a migrant-sending area in Nicaragua in which inequality is compared with and without remittances. By including projected earnings of migrants had they stayed in the sending area, Barham and Boucher suggest that remittance income actually increases the Gini coefficient of income distribution in Bluefields, Nicaragua. However, they are unable to account for general equilibrium effects in their counterfactual, so it is not entirely clear that they are closer to the truth than other studies that leave alternate income projections out. A further complication is that households may trade places in the income distribution over time, confounding remittance impacts on inequality (Arslan and Taylor 2011).

Thinking Beyond Experiments

Experiments, with few exceptions, focus on evaluating the impacts of treatments (e.g., remittances) on the treated (remittance-receiving households). Yet the impacts of remittances do not end here. Economic linkages transmit the impacts of remittances from the households with migrants to others in the migrant-sending area. The latter include non-migrant households. In the biological or physical sciences, experiments are useful because they introduce a random, exogenous source of variation that can be reasonably contained. One can be fairly confident that administering a test drug to a treatment group will not affect members of the control group. In contrast, both migration and remittances unleash impacts that spill over into non-migrant households.

Remittances, like public transfers, stimulate demand in local economies, almost immediately spreading influences to non-migrant households. Migration also has immediate impacts on local labor markets, including possibly increasing local wages. This can be positive for labor-supplying households but negative for local employers. In social science experiments, we are often interested in looking at the effects of something that is not necessarily confined to a single person or household. And since we want to compare the treatment group to a relatively similar control group, it is hard to be certain that there will be true separation between the two. If remittances influence incomes in non-remittance-receiving households, the differences we observe in outcomes between these two groups may tell us little about the true impacts of remittances on remittance-receiving households, and even less about impacts on local economies. If we could find entire villages without remittances to serve as controls, it would raise the question of why some places have remittances to begin with and others do not.

Migration researchers might not think of themselves as conducting remittance experiments, but in effect we are whenever we perform an econometric analysis of remittances. We use observed differences in outcomes between households that do and do not receive remittances in an effort to identify remittance impacts. If local economic linkages transmit impacts from migrant to non-migrant households, the validity of this identification strategy breaks down. If income linkages are positive, the non-remittance households will be better off than they would be without migration, and it will be more difficult to use statistical methods to identify a positive remittance impact. Ironically, analogous to Miguel and Kremer's (2004) celebrated Worms study, the impact of the "remittance treatment" might be so positive that it is difficult or impossible to document by comparing the treatment and control groups.

The importance of general equilibrium effects in remittance impacts may be large (Taylor and Dyer 2009). Households tend to spend their income locally, stimulating local economic activity and creating multipliers or spillover effects that alter outcomes for both non-migrant and non-remittance households. Taylor and Filipski (2014) found that every dollar of remittances lost during the Great Recession of 2007 reduced household income in rural Mexico by $1.73.

There might be negative spillovers, too; for example, migration and remittances may push up local prices (including wages) paid by some households. By making the 'control' households more (less) like the treatment group, general-equilibrium spillovers tend to cloud our understanding of cause and effect and lead us to underestimate (overstate) the true impact of remittances.

Yang and Martinez (2006) explore some general equilibrium effects of remittances in the Philippines by measuring poverty outcomes for non-migrant households. Their finding is informative, but it does not reveal how general equilibrium effects might unfold. Understanding the structural relationship between remittances and outcomes in migrant-sending areas is important if one wishes to design policies to influence these outcomes. Modeling spillover effects requires data on both remittance-receiving and non-remittance-receiving households.

Just as impacts in remittance-receiving households may evolve over time, so may spillover effects. Any study that uses data from a single period to examine the general-equilibrium effects of migration risks missing important dynamic impacts. To understand remittances' full impacts we need to see how the economic conditions of a household or individual change over time in response to the influx of remittances and to other economic conditions.

Data to examine dynamic and spillover effects in migrant-sending economies naturally are more complex and expensive to collect than single-period data on remittance-receiving households. This cost needs to be balanced against the possible benefits: a more complete understanding of the impacts of migration and remittances on the sending areas. As more panel data become available for migrant-sending regions, we can expect a more dynamic and comprehensive reckoning of remittance impacts.

Conclusions

It is difficult to draw many firm conclusions from the existing empirical literature on remittance impacts. On most questions we find results that go in conflicting directions: the impacts of remittances appear to vary in different places and under different circumstances. This suggests that the actual impacts of remittances are conditional. There is a need for new and rigorous empirical research focusing on the conditions that shape remittance outcomes. When examining general equilibrium effects, as well as systems with the kind of feedback loops that exist in migration studies, there may be benefits to using structural models instead of the reduced form empirical models that are most common in the studies above. Timmins and Schlenker (2009) discuss the circumstances under which structural empirical models are more appropriate than reduced form models in the context of environmental and natural resource economics, but similar conclusions can apply to migration

studies. Their discussion of feedback effects deals with how human decisions and biological systems interact, but there are also important interactions within economic systems. For example, high numbers of migrants from a village may transmit economic conditions at the migrant destination back to the origin community through remittances, and this, in turn, may influence future remittances.

One conclusion that we cannot ignore is that migrant remittances have impacts not only on the remittance-receiving households but also on the source economies of which they are part. Local economy-wide modeling offers a glimpse into the complex ways in which remittances and migration reshape migrant-sending economies over time. Future work that examines dynamic and general equilibrium influences and incorporates structural modeling will help clarify that nature of the migration-development relationships that researchers have begun to identify.

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International Migration, Gender and Family: A *Miroir* from Latin America

25

Silvia E. Giorguli and Maria Adela Angoa

Introduction

It has been close to four decades since the discussion on the links between gender and migration was explicitly put forward by scholars. Since then, numerous research projects and publications have centered on this interaction, generating abundant empirical evidence and theoretical discussions.[1] "Engendering" migration studies made visible the participation of women as active actors in the migration process in different ways, both at the origin and destination sites. It also broadened the scope of migration research as it was paralleled by a discussion around family and human mobility, integrating the participation of other members of the family into the migration process (for example, exploring the reorganization of roles and responsibilities and the transformation of family relations when one or more members of the household migrate).

The cumulative knowledge on migration and gender can be grouped broadly (but not exhaustively) in four main questions: (1) to what extent migration transforms gender relations and women's status; (2) the particular role of women in international labor markets, which differs from that of male migrants and which is linked to gender ideologies; (3) the transformation in family formation, dynamics and arrangements due to the mobility of men and women (and how it transforms gender relations); (4) the potential change in women's situation when the migration process increases their participation in the public sphere. These questions have been studied either from the perspective of the communities of origin or of destination.

With a predominant women-centered approach, the first of these questions has looked at how the position of women may shift when they move internationally. The underlying argument goes parallel to the broader discussion about women's participation in the labor force and women's status. Female migrants in the labor market, especially in wage work, are expected to gain economic independence (Morokvasic 1984), to have better positions within the household and a greater say in household decisions regarding the distribution of resources and

[1] An example of the abundant literature on the topic is the publication of reviews on gender and migration. From the article by Morokvasic (1984) to more recent publications by Pessar and Mahler (2003), Donato et al (2006), Ariza (2000), Hondagneu-Sotelo (2011), Herrera (2013) and Arias (2013), all of them summarize from different perspectives the results and the emerging research agenda on gender and migration. For a review of recent research on international migration, gender and family in Latin America see Rozée and Zavala (2014).

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_25

responsibilities.[2] This perspective assumes that the change in gender relations will occur at destinations and is dependent on the participation of migrant women in the labor force. Not necessarily related to women's work, the access to resources (for example, through the participation in social welfare programs or via the legal protection in cases of domestic violence) and the exposure to new gender ideologies at the destination are also seen as mechanisms that may change the position of women within the household (Hondagneu-Sotelo 2007; Donato et al. 2011; Itzigsohn and Giorguli 2005). Other works have also pointed out that the relations between spouses may change when women remaining behind assume new roles and responsibilities as an adaptation to the absence of the spouse, potentially leading to less gender inequality (Suárez and Zapata 2004; Ariza 2000; D'Aubeterre and Ariza 2009).

In spite of the optimistic views regarding the potential role of migration in the transformation of gender relations, the evidence is not conclusive and even contradictory (Morokvasic 1984; Arias 2013; Hondagneu-Sotelo 2003; Tienda and Boothe 1991). Women may gain in some dimensions and lose in others. For example, female migrants in the labor market may gain some economic independence but may also face ethnic and class discrimination and may be especially vulnerable and dependent on the family resources at arrival or when undocumented. In the communities of origin, the wives of migrants may be left under the supervision of other adults (for example, the in-laws) and their position within the household may even worsen. In summary, migration may lead to changes or may result in the restructuration and persistence of gender inequalities (Tienda and Boothe 1991). By itself, migration does little to change gender inequalities. Gender systems in the communities of origin and destination mediate this potential effect (Donato et al. 2011).[3]

Regarding the participation of women as labor migrants in the studies of gender and migration, the empirical evidence indicates that the participation of women in the international labor markets follows the gender segregation pattern in the countries of origin and destination (Morokvasic 1984). Female migrants concentrate more on activities traditionally related to the gender division of labor, such as care work and domestic services, playing a fundamental role for the social reproduction of households and responding to the increasing demand of low-skilled jobs in global economies and, in particular, in global cities (Sassen 2002).

Reviewing the research on female labor and, more specifically, on the role of women in migration circuits, we may trace a change in the view around female labor migrants. Along with the idea that women's migration was linked to the mobility of a male migrant (a spouse, a brother, a father), their participation in the labor market was seen as a secondary wage (Morokvasic 1984). The definition of women migrants as "dependents" in the migration policies in some of the countries of destination summarizes this perception around their marginal role as economic providers. Today, it is more widely recognized that women migrate for labor reasons and that their movement may not be chained to that of other male family members. Partially, this is related to the greater economic participation of women in the labor markets in the countries of origin and to what Saskia Sassen (2002) has

[2] A systematic analysis of how women's participation in the labor market leads to changes in family dynamics in developing countries—specifically in Mexico and in Latin America—is presented in García and De Oliveira (1994, 2011).

[3] Less research has been conducted regarding the changes in men's roles and masculinity as a result of international migrations (Herrera 2013). Nonetheless, some studies have reported how the ideology around men's roles and masculinity are reinforced among male migrants as a response to their experiences of being away from the family or as a strategy to cope with discrimination experiences at the receiving communities (Rosas 2008). We also know that the increasing participation of women in female labor migration circuits has necessarily transformed the traditional division of roles within the household, leading to a change in the position of husbands/fathers, especially when they stay in the countries of origin with the children (Pagnotta 2014).

described as the "feminization of survival circuits at the countries of origin", that is, the growing dependence of households and economies on female labor in a context of stagnant or shrinking economies.

To what extent does the participation of women as labor migrants change gender relations? Referring to the situation of migrant women at the destination countries, here again the evidence remains inconclusive and contradictory and will vary depending on the particular experiences (Ariza 2000). For the majority of women in low skilled jobs, they may face adverse scenarios where gender discrimination, the racial discrimination against migrant workers and class exploitation add up (Morokvasic 1984; Ariza 2000).[4] Nevertheless, "two distinct dynamics converge in the lives of immigrant women. On the one hand, these women make up an invisible and disempowered class of workers in the service of the global economy's strategic sectors. . ."; on the other hand, their greater access to economic and institutional resources may alter the gender hierarchies in which they find themselves (Sassen 2002: 260).[5]

A third dimension incorporated into the studies on gender and migration has to do with how families are transformed by the international mobility of its members. A first thought is that the geographical separation of the family members may be related to a greater household instability (Morokvasic 1984), marital dissolution (Ariza 2000) and to a higher risk of family disintegration (Herrera 2013). What we know now is that international migration may play both a transformative and a non-transformative role in family dynamics (Arias 2013) and families react and adapt to the geographical separation in different ways. The practices of transnational motherhood and fatherhood illustrate this adaptation strategy (Salazar 2005; Cerrutti and Maguid 2010; Mummert 2005, 2012; Pagnotta 2014; Orellana et al. 2001). In any case, it is expected that the new family dynamics across borders may also change the position of men and women within the household modifying gender and intergenerational relations. Adding family into the research on gender and migration allowed to make visible the role of other members of the household—beyond the spouses or the parents—in the migration process and in the family reorganization. On the one side, the literature on transnational motherhood shows the participation of the extended kin—mainly other women—who take over the supervision and care of children left behind. On the other, there is a growing line of research on children left behind or migrating with their parents and the impact of their own and/or of others migration in different dimensions (health, education, well-being in general, for example) (Kanaiaupuni 2000; Kanaiaupuni and Donato 1999; Yabiku et al. 2012; Giorguli and Serratos 2009).

Finally, beyond the potential changes within the household, international migration may also change the participation of women in the public sphere. At origin, women may take over the role of their absent spouses or fathers when they are away; thus, they may participate in public discussions within communities (Ariza 2000). There is also some research on to what extent they may increase their political participation (Franzoni and Giorguli 2012; United Nations Population Fund 2006). From the perspective of the countries of destination, linked to their roles as caregivers and homemakers, migrant women tend to be more acquainted than migrant men

[4] The story may be different for female skilled migrants. As women's education tend to increase in sending countries and in response to demands in certain sectors, such as health services, at receiving economies, female skilled migration has tended to increase, even more rapidly that male skilled migration and unskilled female migration (Docquier et al 2009).

[5] Different empirical studies for Latin American migrants in Europe (Roca 2014) and female migrants from Asian countries (Bélanger et al 2010; Bélanger and Linh 2011) find a similar coexistence of two divergent dynamics regarding the case of foreign brides. After moving in order to marry a person in the country of destination, these studies report that women reproduce traditional gender roles that reaffirm their subordinated position within the household; nonetheless, the women interviewed also report a certain empowerment that transcends their vulnerable situation and the discrimination they face linked to their better economic position and a more equal gender relation compared to the one existing in their countries of origin.

with the dynamic of the institutions that provide public and social services (Sassen 2002). To the extent that they are more oriented towards the settlement in the receiving countries than men, they may get involved with community building and activism. As in the other examples, the potential changes on women's participation in the public sphere—or the persistence of the current practices—will depend on many factors such as the prevailing gender ideology at origin and destination countries, the pattern of migration flows (whether women move with their husbands and other family members) and the interest on settling down in the receiving context (versus the expectation of eventually returning to the country of origin).

Following from the state of the art on gender and migration as summarized in the prior paragraphs, the goal of this chapter is to present and discuss two specific aspects that have not been as systematically addressed in the recent reviews on this topic. First, as research on gender and migration made more visible the active role of women as migrants and as female labor participation increased around the world, there is a continual reference to a process of "feminization of migration" (Donato et al. 2006, 2011; Yinger 2007; Oishi 2005). Specifically, this concept implies that there is an increase in the participation of women in migration flows—particularly as labor migrants—to the point of predominating over male participation in some cases. In the first section of this chapter we look at the trends on the sex composition of migration stocks and at the flows of some specific countries.

Following on the arguments of how the sex composition of the stocks and flows is linked to gender ideologies and how it interacts with family dynamics, in a second section we analyze a topic less treated: the age composition of migration stocks, with particular attention on its implications for family structure and dynamics. The analysis concentrates not only on working age migrants but looks at the comprehensive age structure of migration stocks as a mean to incorporate a family perspective into the analysis of the trends regarding the feminization of the flows.

The third section looks at the possible link between migration and family formation. As it has been mentioned, family dynamics are transformed as the geographical location of its members change. The literature on transnational family has widely documented how the parent-child relations, for example, are reinvented when parents and children live in different countries. However, there is less reference to how migration modifies the process of family formation, dissolution and how they may interact with the changes or continuities in gender inequalities. Specifically, we look at recent research on how international migration and the start of a union interact with women's status and gender relations. We consider how looking at international migration and the family life cycle as linked processes may add to the understanding of the potential role that international migration plays in changing gender relations, not only between spouses but also between generations (daughter-father relations, for example). Finally, the chapter ends with the presentation of some of the gaps and issues on the link between migration, gender and family dynamics that need to be further considered in the research agenda and for the analysis of the implications of migration policies on this link.

Although the chapter recovers empirical evidence and cases studies from all over the world, it is mainly based on research results from Latin American countries. Focusing on one region allows us to analyze the intersection between international migration, gender and family more in detail. Latin America offers a scenario of heterogeneous experiences. It includes one of the largest migration flows—that between Mexico and the US—a variety of internal movements (among South American countries) and a variety of destinations in the South-North migration flows (to the US and Europe).

Feminization of Migration? Men and Women on the Move

Along with the growth in the number of migration studies that incorporated women in their analysis came the need to estimate how large

the participation of women as migrants themselves was and whether it had remained stagnant or was actually increasing. Estimates based on the stock of migrants in the countries of destination (United Nations 2002; Zlotnik 2003) showed that as early as 1960 women already represented close to half of the foreign born population (stock) worldwide and that the numbers were increasing largely in absolute terms and more moderately in relative ones (see Fig. 25.1a, b and Table 25.1).

There is still a current debate on whether we can speak of a feminization of migration or not (Donato et al. 2011). Most commonly, this concept refers to the comparison of the participation of men and women in the flows or stocks and how it has changed in time. It is specifically linked to the gains in the proportion of women in migration flows and stocks compared to men during the last decades (Donato et al. 2006, 2011). However, it can alternatively be understood as a change related not to the relative participation in the flow but to the increase in the number of women who—contrary to the traditional perceptions around female migration—do not move following a prior migration of a husband or father nor under the logic of family reunification. Within this other perspective, the feminization of migration points to the diversification of the reasons to move, implying that there is an increase in the number of autonomous moves and acknowledging the incorporation of women into the global labor market and their role as labor migrants themselves (Yinger 2007).[6]

There are large regional and country variations in the sex composition and trends in the migration stock and flows around the world. Further research is needed to understand these differences. With the available information and based on prior studies, we can say that both—the sex composition in the stock and flows and their trends—reflect the characteristics of migratory systems, including aspects of the sending and receiving countries. Among such characteristics are the gender systems, women's status (Donato et al. 2011) and patriarchal norms (Cerrutti and Massey 2001), the pattern of female labor participation in receiving and sending communities, marriage and family systems (Massey et al. 2006), as well as the legal frameworks that favor or impede women's mobility in the countries of origin and destination (Oishi 2005; Donato et al. 2011).

Sex Composition of Regional Migration Stocks[7]

As mentioned earlier, there is no agreement yet on whether there is actually a notable increase in the relative participation of women in international migration. Of the 92 million international migrants in 1960, 47 % were women (Zlotnik 2003; United Nations Population Fund 2006). Since then, there has been a rapid growth in the stock of migrants, to 154 million in 1990 and 220 million in 2010 (Fig. 25.1a). That means that the number of migrants—both men and women—has more than doubled in the last fifty years. During that period, the proportion of women increased to 48.1 % (Table 25.1), which implies that the number of women in the migration stock worldwide increased a little bit faster than the number of men. This world estimates hide large regional differences. For example, women represent more than half of the foreign born population in the more developed regions since 1990 while the 2010 data suggest a small reduction in the feminization of migration stocks in the less developed

[6] For a regional comparison—as the one presented in this section of the chapter—this alternative concept of feminization is more difficult to measure as it needs to explore the reasons of men and women for migrating, their labor status and, ideally, how autonomous women are in the decision to migrate or not. It remains as a pending area in the research of migration stocks and flows.

[7] This section is based on the estimates of foreign born population by United Nations (2002 and 2013 Revisions). The data presented here refers mainly to the stock of foreign born population in each country. As we will try to show later in this paper, the view changes when we analyze the data from the perspective of the sending countries/regions.

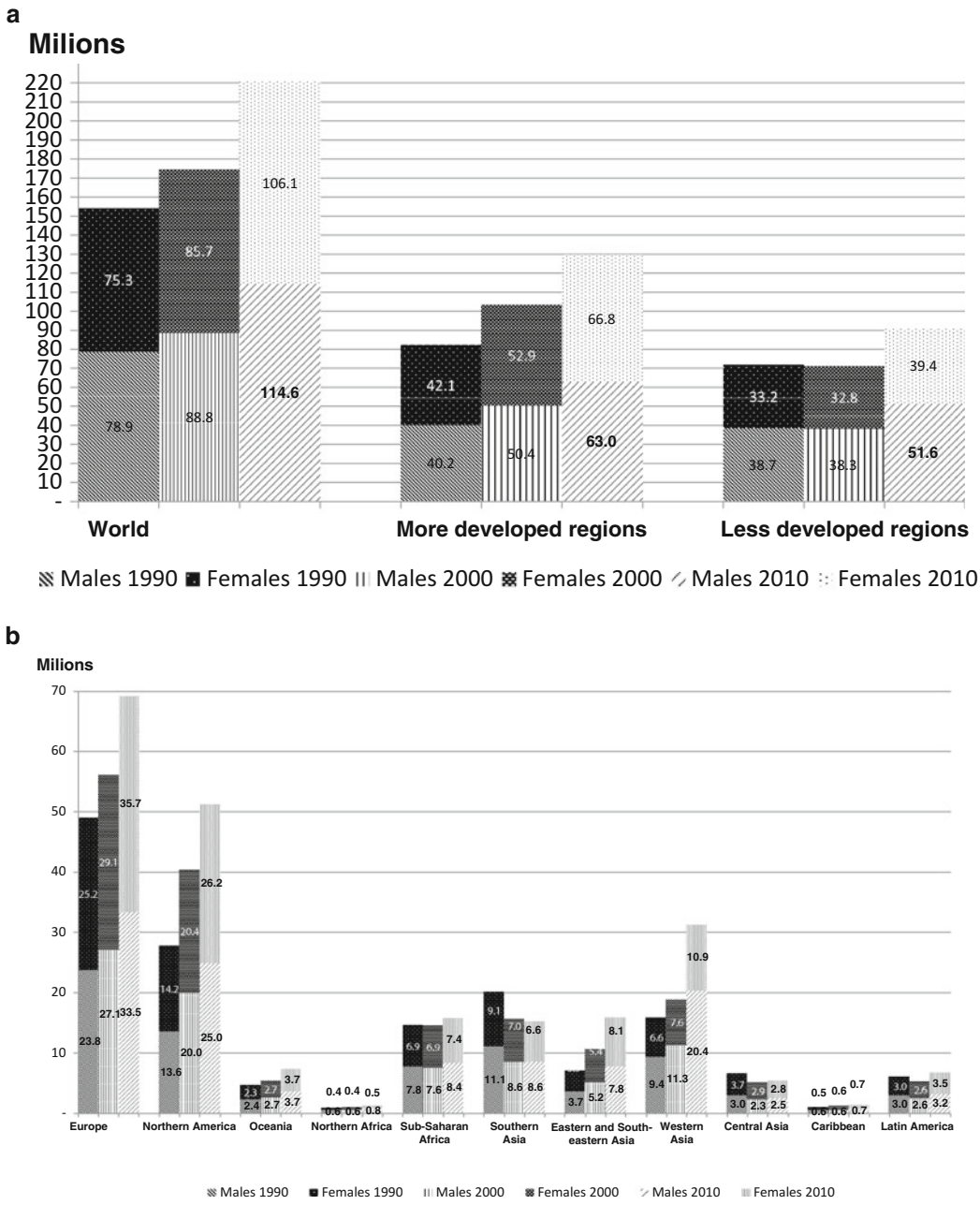


Fig. 25.1 (**a**) Men and women in migration stocks by level of development of area of destination, 1990–2010. (**b**) Men and women in migration stocks by region of destination, 1990–2010 (Source: Estimates based on United Nations 2013)

countries, which in 2010 falls below the same proportion in 1960. It is in the more developed regions—especially in North America—where we see the larger gains in both, the number of male and female migrants, compared to the less developed regions.

We can then trace two different patterns. On one side, a feminization of migration stocks can

Table 25.1 Percentage of female migrants among the total number of international migrants, by major area of destination, 1960–2010

Major area	1960	1970	1980	1990	2000	2010
World	46.6	47.2	47.4	47.9	48.8	48.1
More developed regions	47.9	48.2	49.4	50.8	50.9	51.5
Less developed regions	45.7	46.3	45.5	44.7	45.7	43.3
Europe	48.5	48.0	48.5	51.7	52.4	51.6
Northern America	49.8	51.1	52.6	51.0	51.0	51.2
Oceania	44.4	46.5	47.9	49.1	50.5	50.2
Northern Africa	49.5	47.7	45.8	44.9	42.8	39.4
Sub-Saharian Africa	40.6	42.1	43.8	46.0	47.2	46.7
Southern Asia	46.3	46.9	45.9	44.4	44.4	43.5
Eastern and South-eastern Asia	46.1	47.6	47.0	48.5	50.1	51.0
Western Asia	45.2	46.6	47.2	47.9	48.3	34.8
Central Asia[a]	–	–	–	55.2	55.3	52.6
Caribbean	45.3	46.1	6.5	47.7	48.9	48.8
Latin America	44.7	46.9	48.4	50.2	50.5	52.1

Source: Estimates 1960–2000 based on Zlotnik 2003; estimates to 2010 based on United Nations 2013
[a]There is no separate information for the countries in Central Asia prior to 1990 as they were part of the former Soviet Union

be seen in developed destinations such as Europe, North America[8] and Eastern and South-eastern Asia (Table 25.1). Latin America, which was the first region of destination to reach sex parity in migration stocks (in 1990; also see Zlotnik 2003), keeps its trend toward an increase feminization and shows the highest proportion of women in the foreign born population (52.1 %).

On the other side, many developing regions have a reduction in the participation of women in the stock between 2000 and 2010. Among them is Northern Africa, where the proportion of foreign born women decreases to 39.4 %, and Western Asia, where it falls to 34.8 % (Table 25.1). In the first case, Northern Africa has a low participation in the total migrant stock and is seen more as a region of outmigration than one attracting immigrants. By 2010, there were 1.3 million persons in Northern Africa living in a country different from where they were born.

For Western Asia, the trend is surprising because it suggest a difference with the one observed in prior decades. Until 2000, the increase in the number of immigrant women was related to their participation in services in the attractive oil rich countries within the region (Zlotnik 2003). There still is an important and rapid increase in the number of women migrants between 2000 and 2010, from 7.6 to 10.9 million women in the migration stocks; it is in fact, the fastest growth for this period along with Eastern and South-eastern Asia (Fig. 25.1b). What explains the increase in the gender imbalance among the foreign born population is that the number of male migrants increased more rapidly—it almost doubled from 11.3 million in 2000 to 20.4 million in 2010. It remains to be explored to what extent the greater restrictions and bans on women's autonomous movement in several countries in the region (Oishi 2005) slowed down the increase in the number of women migrating, so that it did not keep up with that for men, and to what extent this pattern can be attributed to the dynamics of the labor system in the oil rich countries.

In a similar comparison as the one used here, Donato et al. (2011) presented age-standardized estimates to control for the possible variations in the age structure of the migration stocks among selected countries. For this chapter, we estimated

[8] For North America, specially U.S., the proportion of women would be higher if Mexican migrants were excluded given that the large Mexican stock has a lower proportion of women compared to flows from other countries (Donato et al 2011).

Table 25.2 Percentage of female migrants 20–64 years old among the total number of international migrants in this group, by major area of destination 1990–2010

Major area	1990	2000	2010
World	47.6	48.2	47.0
More developed regions	50.3	50.5	50.8
Less developed regions	44.2	44.3	41.0
Europe	50.4	51.0	50.9
Northern America	50.2	49.8	50.4
Oceania	48.8	50.1	50.3
Northern Africa	37.5	36.3	35.3
Sub-Saharian Africa	45.0	46.1	44.9
Southern Asia	44.2	44.2	42.9
Eastern and South-eastern Asia	47.9	51.5	51.1
Western Asia	36.8	35.7	30.8
Central Asia	53.2	54.0	50.0
Caribbean	49.2	49.9	49.9
Latin America	49.5	50.2	52.6

Source: Estimates based on United Nations 2013

the sex composition of the foreign born population 20–64 years old from 1990 to 2010. We wanted to isolate the possible impact of a migrant population with a larger proportion of elderly (65 and over), where the female to male ratio is higher (Dyson 2012) and confirm the changes towards the increase or decrease of women in the migration stocks for the working age population. When analyzing this age group in the predominant labor force years, the percentages fluctuate one or two percent points below the ones observed for the whole population (Table 25.2). Nonetheless, it confirms the trends observed in Table 25.1. Only in Northern Africa and Western Asia, the difference in the sex parity for this age group compared to that for the whole population vary more. For example, in 1990 the difference was around ten percentage points in Western Asia (47.9 % for the whole population; 36.8 % for those between 20 and 64 years of age). In 2010, only 30 % of the migration stocks in this age range were women.

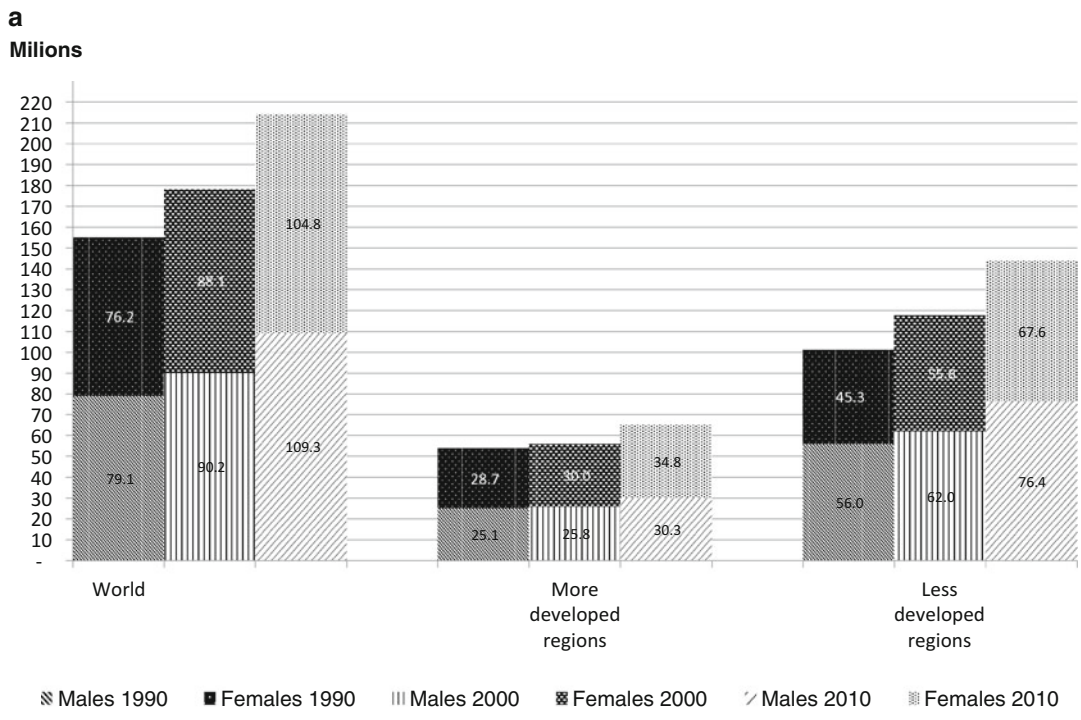
So far, the information presented shows that, in spite of the large increase in the number of women in migration stocks, when looked at the regional level there is no convergence—but on the contrary, a certain polarization—in the process of the feminization of migration from the perspective of the receiving countries. That may not be the case for skilled migration. According to Docquier et al. (2009), the rapid expansion of education for women in the last decades around the world, along with the pressing need for female labor in skilled occupations such as nurses or in services, explains why the number of highly educated women has increased at a greater rate than male skilled migration and low-skilled female migration for OECD countries.[9]

Women in Migration. Perspectives from the Countries of Origin

Most of the discussion and analysis on the feminization of migration is based on the data about foreign-born population in destination countries (Zlotnik 2003; Donato et al. 2011; United Nations, 2006). Typically obtained from census data, this information is usually more reliable and available than the information on flows and the composition of outmigrants. Nonetheless, we could expect to find a different picture regarding the participation of women in international movements when analyzing the data from the perspective of the countries of origin. Along with the increase in the demand of female labor in the global labor market, changes in the participation of women in flows and in the volume of outmigration would reflect the patterns in other dimensions, such as women's status, the gender system, family relations and female labor participation rates in the countries of origin (Oishi 2005; Massey et al. 2006; Cerrutti and Massey 2001).

The recent publication by the United Nations (2012) of the information on number of foreign-born men and women by country of origin allows us to look at the trends between 1990 and 2010. Figure 25.2a, b capture the increase in the volume of outmigrants in all regions in the world. They also show the greater participation of less developed regions as countries of origin. Female

[9] Docquier et al (2009) based their analysis in the migration stocks and the emigration rates of highly educated population. Nonetheless, there analysis does not include the information on foreign born for non OCDE countries.



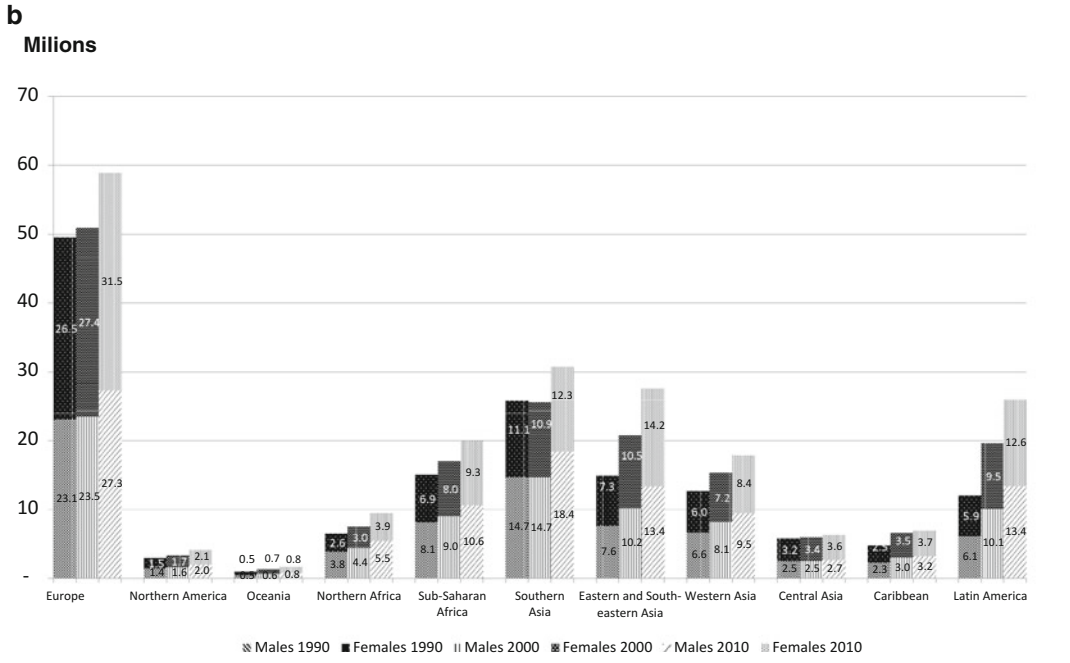


Fig. 25.2 (**a**) Men and women in migration stocks by level of development of the region of origin, 1990–2010. (**b**) Men and women in migration stocks by region of origin, 1990–2010 (Source: Estimates based on United Nations 2012)

Table 25.3 Percentage of female migrants among the total number of international migrants, by region of origin, 1990–2010

Major area	1990	2000	2010
World	49.1	49.4	48.9
More developed regions	53.4	53.7	53.4
Less developed regions	44.7	47.4	46.9
Europe	53.5	53.9	53.6
Northern America	52.1	51.6	51.1
Oceania	50.9	50.2	50.7
Northern Africa	40.5	40.8	41.9
Sub-Saharian Africa	45.9	46.9	46.7
Southern Asia	43.0	42.5	40.1
Eastern and South-eastern Asia	48.8	50.8	51.5
Western Asia	47.5	46.9	46.8
Central Asia	56.0	57.7	57.5
Caribbean	52.0	53.5	53.4
Latin America	49.1	48.4	48.3

Source: Estimates based on United Nations 2012

migrants coming from developed countries already outnumbered male migrants by 1990, and this trend remains during the two decades analyzed. In contrast, in spite of the increase in the number of women moving to live in another country in developing regions, men are predominant in the stock of outmigrants (Fig. 25.2a and Table 25.3).

The feminization of migration does not appear clearly from the perspective of the countries of origin and there are also large variations among the different major regions (Table 25.3). Central Asia is the region with the greatest participation of women as outmigrants. The proportion remains around 57 % throughout the last two decades. In contrast, in Northern Africa and Southern Asia, the same proportion is less than 42 %. The case of Central Asia is not surprising as the outmigration responds largely to the demand of female labor in services and skilled work; that is the case of Sri Lanka, Philippines and Indonesia where the percentages were above 65 % in the year 2000 (Oishi 2005). The Caribbean, with a more skilled migration which includes doctors, nurses and other caregivers and with a matrifocal family system (Massey et al. 2006), shows also higher participation of women in the stock of population living abroad since 1990.

The proportion of women among emigrants remains below 50 % in Latin America. Nonetheless, other studies show that if Mexico were excluded, the sex ratio would show a larger participation of women (Donato et al. 2011).

Finally, the scenario from the perspective of the sending countries does not show a clear feminization of migration, understood as an increase in the participation of women in outmigration during the last two decades; for most of the countries, the proportions have stayed constant (Table 25.3). From a broader concept of feminization (as the one suggested by Yinger 2007), the data presented here does not allow us to explore whether female movements have become more autonomous or less tied to other relatives' prior moves. A more detailed analysis of one region, Latin America for the purposes of this chapter, may give more useful insight on the recent trends regarding the changes and continuities in the participation of women in international migration.

A Heterogeneous Scenario: Men and Women in International Migration in Latin America

According to UN estimates, there were close to 33 million Latin American and Caribbean persons living in a country different from where they were born. This represents around 16 % of the total number of migrants in the world. As shown in Table 25.3, around half of these international migrants are women. During the last decades, the migratory patterns of Latin America and the Caribbean have shifted. Probably the most notable change is the shift from a receiving region to one of origin. During the last decades of the past century, the region clearly became one of outmigration. This change coincided with demographic dynamics, the urbanization of the region and the expansion of education. In demographic terms, the periods of more intense outmigration overlap with the entry into labor ages for those

cohorts with the largest demographic growth (those born between the 1960s and 1980s; see Prieto 2012). It also overlaps with a period of expansion of basic education in most of the countries in the region and with the change from a mostly rural to a mostly urban population for a large part of the Latin American and Caribbean countries (Martinez-Pizarro 2003; Prieto 2012; Cerrutti and Maguid 2010).

During the period of the great migrations from Europe and—to a lesser extent—from the Middle East and Asia, men represented more than half of the incoming flows (Martinez-Pizarro 2003). The scenario today is more heterogeneous regarding the regions of origin and destination and the sex composition of the flows and stocks. After the immigration period, we can now clearly locate three types of flows. Historically, there has been a moderate mobility within the region with a larger presence of women in the stocks (Martinez-Pizarro 2003). The swings in interregional mobility have responded to changes in the economy and to political events within the region. For example, interregional flows were clearly increasing until the 1980s, when the lost decade had an especially negative effect on two of the main countries of attraction in the area (Argentina and Venezuela). Nonetheless, interregional mobility has not slowed during the last decade (Cerrutti and Maguid 2010); between 1990 and 2010 it grew from 4.0 to 4.6 million persons (Table 25.4) and half of these are women. There is no clear pattern towards a feminization in migration; nonetheless, there are large variations within the region linked to the structure of the labor market and to the consolidation of social and family networks in some destination countries. For example, the proportion of women in the stock is larger in some Caribbean countries of origin, responding to a profile of demand of female labor in the tourist industry of neighboring countries (Martinez-Pizarro 2003). Another example is the clear pattern of predominance of women among international migrants moving within the South American region (Fig. 25.3).

Northern America concentrates the largest volume of migrant population from Latin American and the Caribbean (Table 25.4). To date, more than 70 % of the stock goes to the United States and Canada. Basically all the migration from Mexico goes to those two countries (around 99 %) and the same is true for most of the migration originating in Central America (79 %) and the Caribbean (77 %). South Americans are more diverse in terms of their destinations, and only roughly a third of them go to Northern America. In this migration, we do not see again a clear pattern of feminization (Fig. 25.3). Nonetheless, we can see that there are differences by subregion of origin. As mentioned earlier, the stock from Mexico is most predominantly male, reflecting the past of a male dominated flow from rural areas. Among Central Americans, for the last two decades we observe a similar pattern to that of Mexicans. The migrant stocks with a larger presence of women (above 50 %) are observed for those from the Caribbean and from South America. Martínez-Pizarro (2003) suggest that these two different trends in the mobility to the US—one with men predominant and another where women are the majority—respond to two different sociodemographic profiles and labor patterns. Mexican and Central American migrant women have lower participation rates in the US (hardly above 50 % among Mexican women in 2000; Caicedo 2010; Giorguli et al. 2007; Angoa 2005) than women from South America and the Caribbean, with participation rates above 70 %; they also have lower educational attainment. In all cases, migrant women work more often than those women remaining in the countries of origin. Nonetheless, in Mexico and Central America there may be a greater combination of women moving to the US to work and women moving for family reasons or under the schemes of family reunification; while in the second case (South America and the Caribbean), women's mobility may be more clearly tied to looking for better income-earning options—as suggested by their higher education and their greater labor force participation rates.

In their study about differences on the probabilities to migrate to the US in five Latin American countries (Mexico, Costa Rica, Puerto Rico, Dominican Republic and Nicaragua), Massey et al. (2006) suggest that the family

Table 25.4 Latin American and Caribbean migrants stocks by region or country of destination, 1990–2010

Region or country of origin in LA	Region or country of destination														
	Total			Canada and United States			Europe			Latin America and the Caribbean			Rest of the world		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
															Mexico
1990	**50,45,082**	27,53,085	22,91,997	**49,70,906**	27,21,715	22,49,191	**31,332**	11,540	19,792	**40,378**	18,587	21,791	**2,466**	1,243	1,223
2000	**1,00,43,907**	55,06,962	45,36,945	**99,42,637**	54,62,895	44,79,742	**44,702**	16,560	28,142	**52,446**	25,443	27,003	**4,122**	2,064	2,058
2010	**1,24,41,703**	68,84,726	55,56,977	**1,22,90,077**	68,15,679	54,74,398	**78,957**	32,662	46,295	**66,983**	33,597	33,386	**5,686**	2,788	2,898
															Central America
1990	**25,47,845**	12,45,160	13,02,685	**13,48,758**	6,60,698	6,88,060	**17,936**	8,299	9,637	**11,69,874**	5,70,523	5,99,351	**11,277**	5,640	5,637
2000	**27,63,370**	13,99,430	13,63,940	**22,50,972**	11,54,429	10,96,543	**43,122**	17,213	25,909	**4,54,894**	2,20,350	2,34,544	**14,382**	7,438	6,944
2010	**36,58,261**	18,62,448	17,95,813	**28,97,936**	15,06,196	13,91,740	**98,234**	37,714	60,520	**6,46,254**	3,10,441	3,35,813	**15,837**	8,097	7,740
															Caribbean
1990	**47,53,798**	22,81,602	24,72,196	**38,00,921**	17,92,359	20,08,562	**3,47,526**	1,63,015	1,84,511	**5,82,810**	3,14,857	2,67,953	**22,541**	11,371	11,170
2000	**65,37,655**	30,41,232	34,96,423	**53,05,396**	24,33,112	28,72,284	**4,75,633**	2,04,083	2,71,550	**7,01,062**	3,69,743	3,31,319	**55,564**	34,294	21,270
2010	**68,79,109**	32,07,773	36,71,336	**53,12,769**	24,45,946	28,66,823	**6,71,407**	2,89,908	3,81,499	**8,24,436**	4,30,498	3,93,938	**70,497**	41,421	29,076
															South America
1990	**44,45,111**	21,33,039	23,12,072	**13,34,707**	6,43,500	6,91,207	**7,44,208**	3,28,203	4,16,005	**21,86,197**	10,70,205	11,15,992	**1,79,999**	91,131	88,868
2000	**67,76,684**	31,94,804	35,81,880	**22,77,228**	10,91,245	11,85,983	**13,96,213**	6,02,905	7,93,308	**25,99,281**	12,55,934	13,43,347	**5,03,962**	2,44,720	2,59,242
2010	**98,60,380**	46,62,639	51,97,741	**30,23,440**	14,69,084	15,54,356	**30,51,315**	13,68,677	16,82,638	**31,05,154**	15,01,104	16,04,050	**6,80,471**	3,23,774	3,56,697
															Total
1990	**1,67,91,836**	84,12,886	83,78,950	**1,14,55,292**	58,18,272	56,37,020	**11,41,002**	5,11,057	6,29,945	**39,79,259**	19,74,172	20,05,087	**2,16,283**	1,09,385	1,06,898
2000	**2,61,21,616**	1,31,42,428	1,29,79,188	**1,97,76,233**	1,01,41,681	96,34,552	**19,59,670**	8,40,761	11,18,909	**38,07,683**	18,71,470	19,36,213	**5,78,030**	2,88,516	2,89,514
2010	**3,28,39,453**	1,66,17,586	1,62,21,867	**2,35,24,222**	1,22,36,905	1,12,87,317	**38,99,913**	17,28,961	21,70,952	**46,42,827**	22,75,640	23,67,187	**7,72,491**	3,76,080	3,96,411

Source: Estimates based on United Nations 2012

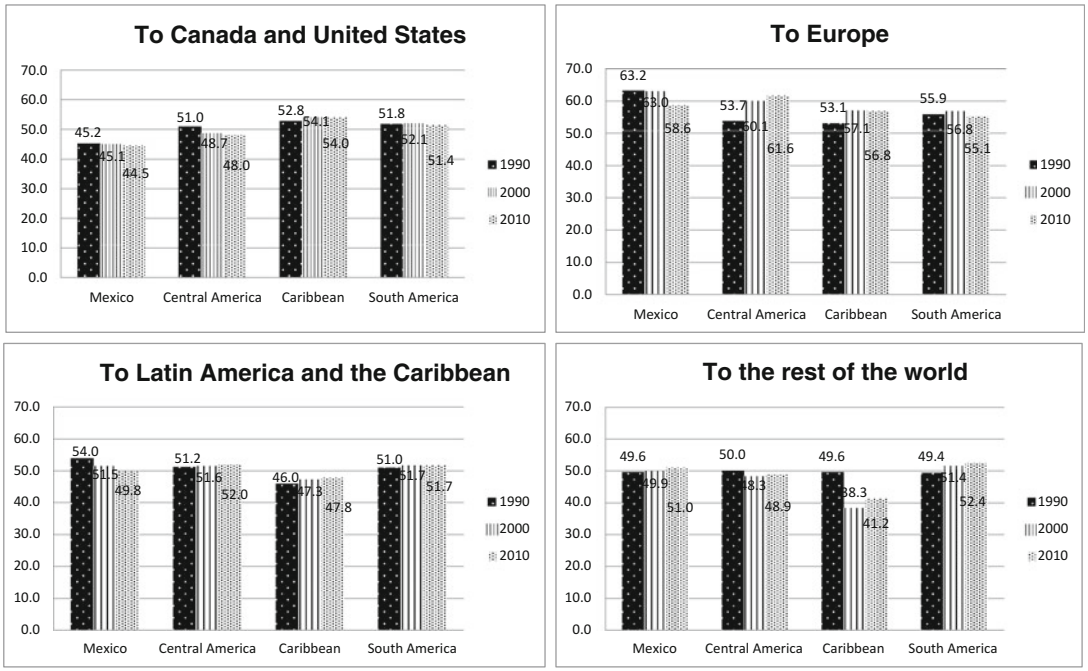


Fig. 25.3 Percentage of Latin American and Caribbean female migrants in the stocks by region or country of destination, 1990–2010 (Source: Estimates based on United Nations 2012)

system and the (more or less) patriarchal relations also define the participation of women in migration to the North. They suggest that in countries with a matrifocal family system, with greater female labor participation rates and female headship, women may be moving more autonomously. In contexts with stronger patriarchal relations and less egalitarian gender relations (in their study, Mexico and Costa Rica), women will tend to move less and their mobility will be related more often to that of the husband.

Finally, there is an emerging pattern of mobility to new destinations, mainly in Europe (Martinez-Pizarro 2003; Prieto 2012; Cerrutti and Maguid 2010). The Latin American and Caribbean population in the stock of migrants in Europe almost duplicated between 1990 and 2000 (from 1.1 to 2.0 millions) and it doubled again by 2010, when it reached 3.9 million (of which 3.1 million were from South America). The main country of destination is Spain, where the number of entries from Latin America added between 200,000 and 300,000 annually between 2006 and 2008 (Prieto 2012). Between 1998 and 2008 the number of migrants from Ecuador increased from five thousand to close to half a million; a similar process occurred for Argentina (from 61 thousand to close to 300 thousand), Bolivia (from less than 3 thousand to 240 thousand) and Colombia (from 18 thousand to 330 thousand) (Cerrutti and Maguid 2010). The figures suggest a "*Latin-americanization of migration*" in Spain (Martinez-Pizarro 2003) and a preference for Latin American migrants over others given their higher education, the language and the cultural similarities—which may favor them or give them preferences over other migrants in jobs such as those of caregivers (of younger or older people). In addition, Spain's policy of giving access to citizenship to third and—in some cases—even fourth generation persons of Spanish descent facilitated the migration as citizens for many, especially from Argentina for whom half of those living in Spain are Spanish citizens (Cerrutti and Maguid 2010).

The stocks of Latin American and Caribbean migrants in Europe have a majority of women

(Fig. 25.3). For Colombia and Bolivia, by 2008 there were 130 female migrants for every 100 male migrants. Nonetheless, in spite of the predominance of women in most of the stocks, there is no evidence of a "feminization of migration"; since 2003 the number of female to male migrants has remained constant for the largest stocks (Colombia, Argentina, Bolivia and Ecuador) (Cerrutti and Maguid 2010). Among countries, there is a large difference in terms of education and occupation. Argentinian women are more educated (even more than Argentinian male migrants in Spain) and those from Ecuador have the lowest education. This corresponds to a greater participation in professional activities among Argentinian women (24.9 % in 2007) and a concentration in manual unskilled jobs for Ecuadorians (61 %) and Bolivians (84 %).

As shown, the sex composition in the flows varies largely across Latin America and the Caribbean and across the destinations. The literature refers to the family system, the economic role of women in the countries of origin, the expansion of female education and the gains in women's status that may lead to a greater female autonomy, as factors that may explain the differences in the sex composition of migration stocks. In a preliminary analysis, we put together the percentage of women in outmigration with selected indicators for some of the countries in Latin America and the Caribbean (Fig. 25.4). Specifically, we looked at the link between women's participation in outmigration and female labor participation rates, women's education (percentage of those 24 and older with completed secondary education) and percentage of female headed households in the countries of origin. In addition, as a proxy of gender inequality, we used the secondary school ratio between girls and boys.[10] What we found is a weak relation between female labor participation rates and women's participation in the number of migrants living in a foreign country (Fig. 25.4); the same occurred with women's education. The graphs show a positive relation between both indicators and the proportion of women in the emigrant population. There is no evidence of a strong link between the sex composition of the stock and female headship or with the secondary school ratio between girls and boys.

Latin America offers a heterogeneous scenario to study the sex composition of migration and to explore the hypothesis of the "feminization of international migration". Within the region, there is no clear trend towards a consistent increase in the participation of women in international migration. Nonetheless, the diversity of female moves—as illustrated by the difference in the labor participation rates of women and in the level of education—may indicate a mixture of a component of women migrating as tied movers, linked to the migration of a spouse or other relative, and another with more educated women, moving autonomously and mainly to new destinations such as Europe. The positive selectivity of female migrants by education compared to men also reflects, to a certain extent, the gains in education for females, which have reduced, and—for some countries—even reversed the gender gaps in education.

It may be then that the sex composition of the flows and stocks have not changed drastically for most of the movements analyzed in this section but that there is indeed a change in the way Latin American and Caribbean women are participating in international migration. This may be especially evident in cases such as the recent patterns of female labor migration from South America to Europe.

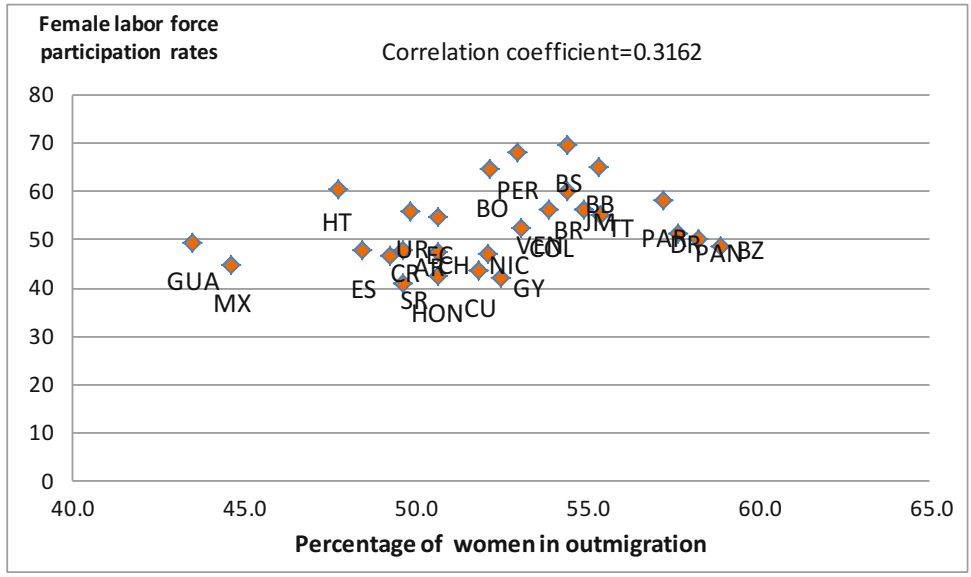
Implications of the Sex Composition of Migration Stocks

The sex composition of migration stocks tells us a story about the link between gender and migration. There is an underlying idea that the greater and/or increasing participation of women in the flows may be the result of gains in women's status mainly in the countries of origin. If women gain in autonomy, they have a greater

[10] We also explored the Gender Inequality Index developed by UNDP (2013). The results were similar as those for the girls to boys ratio among secondary students.

a

Female labor participation rates



b

Proportion of women who finished secondary education

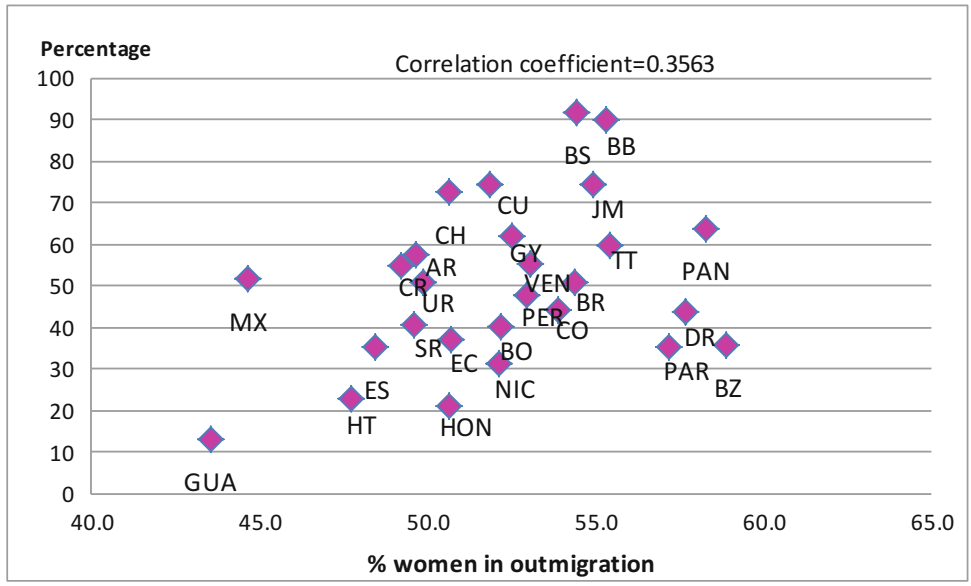
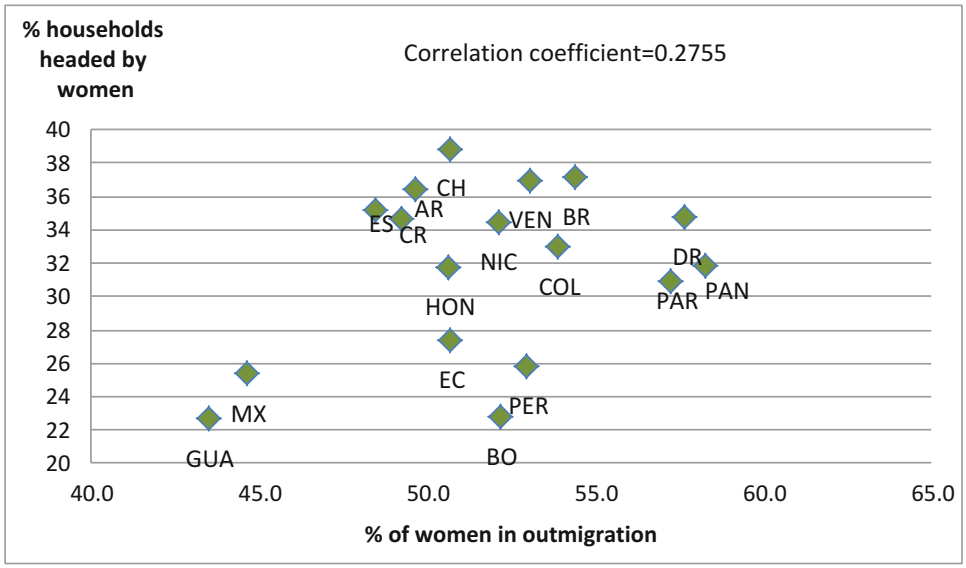


Fig. 25.4 Women in outmigration (population living abroad) by selected sociodemographic indicators in some Latin America and Caribbean countries, 2010. (**a**) Female labor participation rates. (**b**) Proportion of women who finished secondary education. (**c**) Percentage of female headed households. (**d**) Secondary school ratio between girls and boys

Note: *AG* Antigua and Barbuda, *AR* Argentina, *AW* Aruba, *BS* Bahamas, *BB* Barbados, *BZ* Belize, *BOL* Bolivia (Plurinational State of), *BR* Brazil, *CH* Chile, *COL* Colombia, *CR* Costa Rica, *CU* Cuba, *EC* Ecuador, *ES* El Salvador, *GD* Grenada, *GUA* Guatemala, *GY* Guyana, *HT* Haiti, *HON* Honduras, *VG* British Virgin Islands, *JM* Jamaica, *MX* Mexico, *NIC* Nicaragua, *PAN* Panama, *PAR* Paraguay, *PER* Peru, *PR* Puerto Rico, *DR* Dominican Republic, *KN* Saint Kitts and Nevis, *VC* Saint Vincent and the Grenadines, *LC* Saint Lucia, *SR* Suriname, *TT* Trinidad and Tobago, *UR* Uruguay, *VEN* Venezuela (Bolivarian Republic of).

Sources: Estimates of women in outmigration based on United Nations 2012; estimates for female participation rate and for percentage of women with at least secondary education from UNDP 2013; data on female headship from ECLAC, 2013

c Percentage of female headed households



d Secondary school ratio between girls and boys

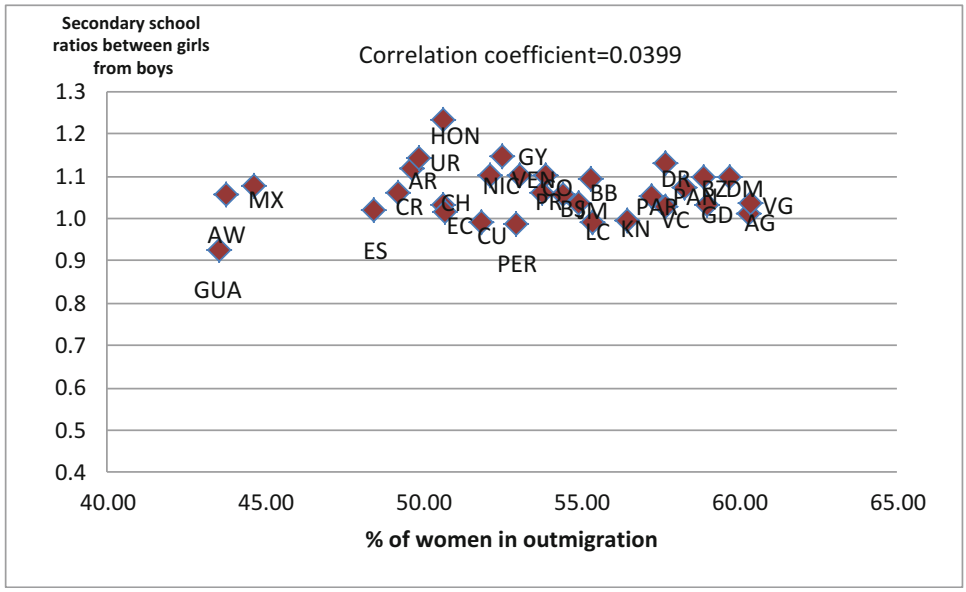


Fig. 25.4 (continued)

say on the decision to migrate—alone or with other relatives—or not. As prior studies on the feminization of migration pointed out (Donato et al. 2011; Massey et al. 2006; Oishi 2005), the participation of women in the flows will reflect to a certain extent gender ideologies and norms.

There is less discussion about other implications of the sex composition of the migration flows and stocks. The predominance of men

and women in the flows may change the sex ratios in the countries of origin and/or of destination. This may be the case in some of the rich-oil Arab countries, where the flow of male migrants has resulted in large sex imbalances; for example, the sex ratios were 3.2 for Qatar, 1.7 for Bahrain and 2.3 for United Arab Emirates in 2010 (Dyson 2012). From the perspective of the regions of origins, we may find examples in Africa, Mexico and Central America, not at the national level but more often at the regional level, where male-dominated flows of outmigrants result in a larger presence of women (left behind) and a relative "scarcity" of men in the communities of origin.[11] When migration has an impact on the sex balance in the receiving and sending communities, it may influence the marriage markets, the patterns of family formation, child rearing and family dynamics (Dyson 2012; Parrado 2004; Esteve et al. 2011; Domingo et al. 2014).

The imbalance in sex ratios due to international migration may also have an impact on women's status and on gender inequality (Bélanger and Linh 2011). For example, the greater presence of women in the communities of origin overtaking roles, decisions and participating in the public sphere in activities that absent men cannot fulfill may further result in gains regarding women's status.[12] However, from prior studies and reviews, we can conclude that the gender norms and ideologies, the participation of women in the labor market, among other factors, will mediate the potential implications of the sex composition of the international migration flows in the regions of origin and of destination.

Finally, it is less clear which are the implications of flows where women are the majority and men stay behind. We have learned from the literature on transnational motherhood that there is rearrangement of care, where other women in the family play a fundamental role (Mummert 2005, 2012; Cerrutti and Maguid 2010; Pedone et al. 2014; Pagnotta 2014). For Latin America, prior studies have documented how the migration of Mexican women to the US (Mummert 2012), Argentinians to Spain (Cerrutti and Maguid 2010), Bolivians to Europe and South America (Cavagnoud 2014) and Ecuatorians to France (Pagnotta 2014) lead to a reorganization of child supervision for mothers of young children; in most of the cases, the grandmothers, aunts or the older sisters (as they become older) overtake the role of the missing mothers while they are away.

Men may also rearrange their parenting and caregiving roles as an adaptation strategy when mothers are absent (Pagnotta 2014) and as a response to the feminization of survival strategies linked to international migration; although women—even if not present in the household—keep their role as primary caregivers in the imaginary of the family (Cavagnoud 2014; Pedone et al. 2014). In fact, the more unstable and uncertain labor situation of men that remain behind or of migrant men at the receiving regions compared to female labor migrants challenges their traditional role as main income earners within the household. Families may adapt and reorganize the traditional gender distribution of responsibilities regarding, for example, the supervision of children. The evidence both at the receiving and sending contexts is inconclusive; as already mentioned, it is more frequent to find other women—elder sisters or extended kin—overtaking the roles of absent mothers. The changes in the role of men as breadwinners and within the household as a response to the greater presence of women in migration flows as well as the modifications in father-children relations when the mothers are absent still remains as a topic open for further research (Rozée and Zavala 2014; Rosas 2014).

[11] For the Mexican case, for example, in some of the municipalities with high intensity of migration, the masculinity index varies between 80 and 90 men per each 100 women. The imbalance is even larger for the age groups between 20 and 34 where the masculinity index for the same municipalities varies between 49.9 and 68.8 (authors' estimates based on the 2010 Mexican Census; see Instituto Nacional de Estadistica y Geografia 2010).

[12] For a larger discussion on changes in gender relations in communities where women stay behind see Ariza (2000) and Arias (2013).

What Does the Age Composition of International Migration Tell Us?

The age structure of the international migration flows and stocks complete the picture that the sex composition depicts. It is well known that most of the migration occurs during the working ages; those between 20 to 64 years represent close to 73 % of all international migrants (United Nations 2011; see also Fig. 25.5a, b). This figure reflects the predominance of labor migration, which concentrates among young adults (25–39).[13] In absolute terms, the mobility of the younger and elder groups is smaller compared to the working age population.[14]

Aside from these regularities, the comparison of the age structure of international migrants allows us to explore the family component of migration. A larger participation of younger cohorts in the stocks will suggest a pattern of whole families moving (or reuniting in a receiving country) versus a pattern of adults migrating alone, either leaving their families behind or as a part of a personal project. In 2011 the UN (2011) estimated close to 33.3 million international migrants 19 and younger. This figure represents 15.6 % of all migrants. Most of these young migrants move to developing countries (60 %).

The age structure of the migration stocks also reflects the pattern of return or permanent mobility. In countries where migrants return to their communities of origin later in their lives, we will see a minor or no increase of the migrant stocks in the older generations and the average age of the destination foreign born stock may remain within the young working ages. In contrast, more permanent movements will result in an eventual increase in absolute terms of the elder foreign born population; if immigration slows down, we may even see an "aging" of the migrant stock population in the destination.

Finally, the age structure of the flows allows us to explore the link between international migration and the timing of life course events in the countries of origin (Prieto 2012). The decision to migrate may be synchronized with or may occur after the transition out of school, into the labor force or retirement out of the labor force. In demographic regimes with higher educational attainment and where the first entry into the labor force occurs sometime in the twenties, moving to another country will occur at older ages compared to countries where most of the young generation is leaving school and starting to work during adolescence. The sex and age pattern of migration may be also influenced by or may influence the timing of other decisions in the life course such as starting a union (Cortina and Esteve 2012) or having children.[15]

As with the explanations that point out that the sex composition of flows is linked with the gender systems at both the receiving and the sending contexts, the resulting age structure is linked to both the characteristics of the timing of the transitions to adulthood in the countries of origin and the institutional conditions (such as the normative age for work and school, the characteristics of the labor market) and the migration policies (for example, regarding family reunification) in the receiving countries.

[13] International or internal migration due to other causes—such as political violence or persecution or environmental causes—may show a more diverse age distribution. For example, according to the UNHCR available data, half of the refugees, people in refugee-like situations and asylum seekers are 18 or younger (UNHCR 2013: 123–125). There are, however, large variations among countries; among a selected group of the countries with the largest number of refugees, from 59 % in Iraq and 52 % in Afghanistan to 16 % in Colombia and 19 % in Germany.

[14] According to UN estimates (2011), the proportion of older persons (65 and older) is higher among international migrants compared to the total population. In other words, in spite of representing a smaller number in absolute term, their relative participation in migration stocks is higher (11.6 %) than that for the total population (7.6 %). Two other characteristics of the stock of older migrants are that they concentrate in more developed regions (67.8 %; four out of ten live in Europe) and that women outnumber men.

[15] Using a longitudinal approach, Lindstrom and Giorguli (2002, 2007) analyzed for the Mexican case how migration influences and is influenced by family transitions.

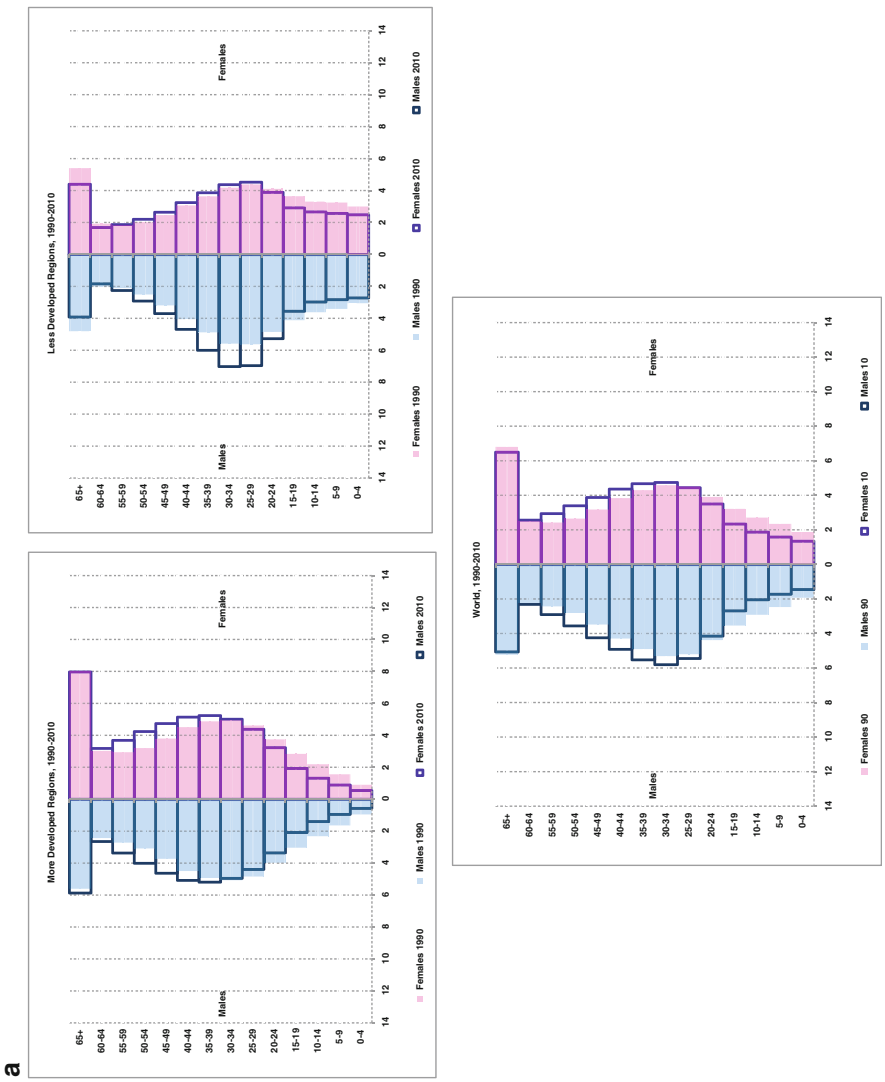


Fig. 25.5 (**a**) Age structure of migration stock by level of development of the area of destination, 1990 and 2010 (Source: Estimates based on United Nations 2013. (**b**) Age structure of migration stock by region of destination, 1990 and 2010 (Source: Estimates based on United Nations 2013)

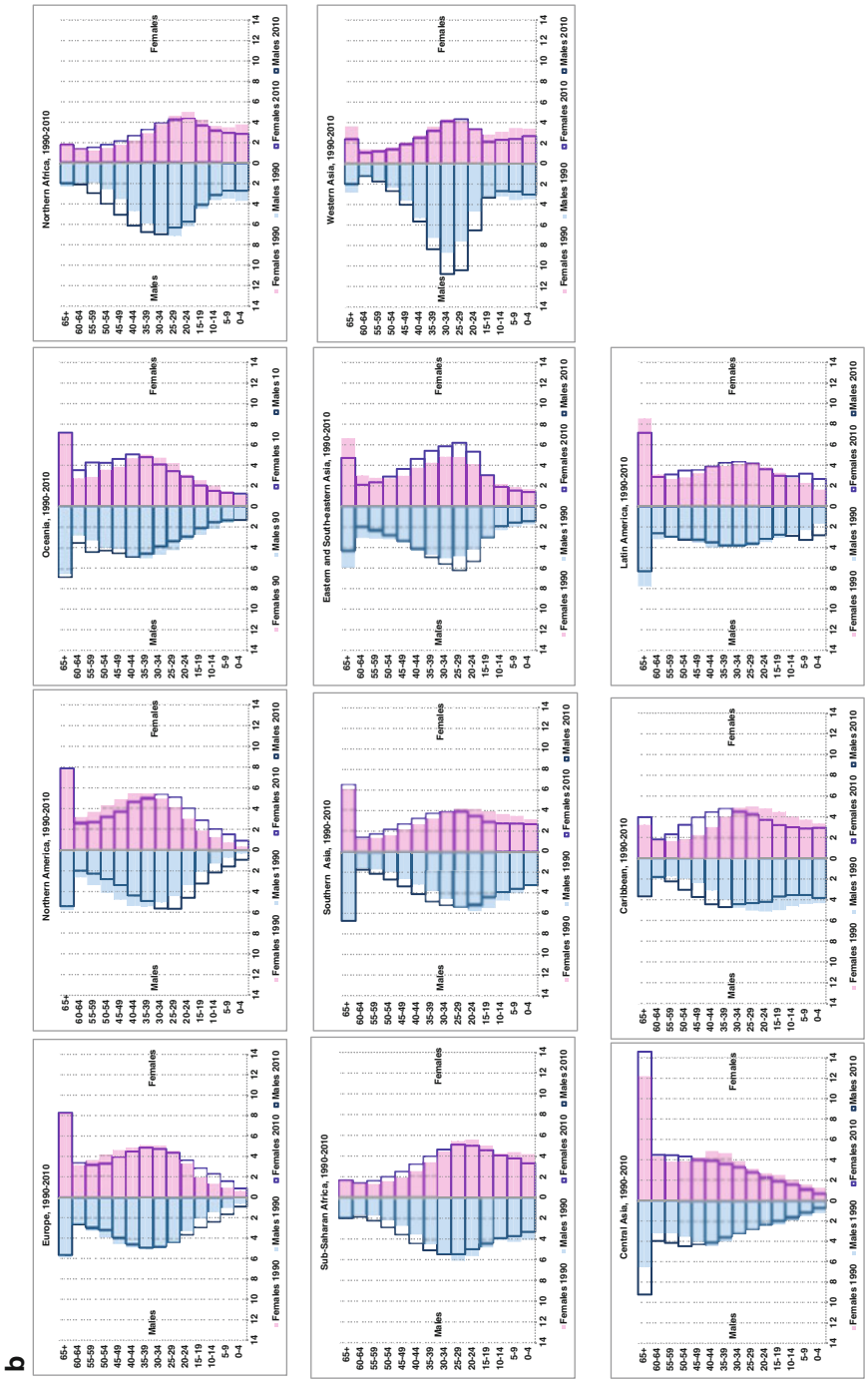


Fig. 25.5 (continued)

Age Structure of Regional Migration Stocks at Destinations

Figure 25.5a, b illustrate the commonalities and dissimilarities in the age pattern of migration stocks at the countries of arrival. In the more developed regions we see a very small participation of young groups (below 20 years of age) and it has decreased during the last two decades. Among the working age population, the majority of the migrants concentrate between 30 and 45 and we observe a sex balance across the different age groups, except for those 65 and older where women represent a larger proportion of the total stock. There is some evidence of an aging process as migrants that arrived decades ago reach the age 45 and older. Of the more developed regions, this aging pattern is more clearly observed in North America (Fig. 25.5b), where the participation of those 40 to 64 has appreciably increased between 1990 and 2010. For all the more developed regions, the sex imbalance at older ages may reflect, both the higher life expectancy of women and a greater preference toward settlement (and a lower return migration) compared to men (for Latin American immigrants in the US and Europe, see Prieto 2012).

In contrast, the age pyramid for less developed regions shows a larger participation of those below age 20 in the migration stock. The population 19 years old and younger represents 31 % in 2010 in Sub-Saharan Africa and close to 20 % in Latin America. Another characteristic of some of the less developed areas is that the major participation of men in international mobility is constant for almost all of the age groups (it tend to decrease and disappear after age 60); this sex imbalance across the age groups is clear for Northern Africa, Western Asia, Southern Asia. For less developed regions, labor migration may commence at younger ages, as it is larger by the age group 20-24 and it concentrates on those between 25 and 34, slightly a younger profile than the one observed in the more developed regions. Finally, we do not observe an increasing participation of the older groups.

Figure 25.5a, b are based on the information for foreign born population at destinations. The picture shown captures long-time migration and mixes experiences for different periods and different times of arrival for the same region. If we had estimations of the flows, we could more accurately assess the link between migration patterns and the life course. Prieto (2012) estimated the net migration rates for each 10-year intercensal interval for a group of selected Latin American and Caribbean countries from 1960 to 2010. Her analysis suggests a high prevalence of international mobility for young adults in their early working life, concentrated between age 20 and 29 for almost all the countries in the region. We do see a younger pattern for Mexico during some time—for those between 15 and 19 years of age—and for Dominican Republic, where migration peaks in this same age group. In both countries, more than half of the teenage population will leave school before finishing their secondary education (UNDP 2013).

Within the increasing heterogeneity in the profiles during the last decades, we observed some cases with increasing outmigration after age 30. That would be the case, for example, of the most recent migration from Argentina and Uruguay to Spain. In both, Argentina and Uruguay we find a larger proportion of the youth moving into tertiary education compared to Mexico and the Dominican Republic (UNESCO 2014).[16] Another example is the outmigration during the times of political violence and instability, when flows are larger among non-typical age groups such as adult men of older ages.

Finally, the return migration is also captured in the age composition of the flows. Sometimes net migration increases in countries of origin after age 45. For older adults getting close to the retirement age at the countries of origin and for the elderly, there may be incentives to go back to their countries of origin to reunite with

[16] According to UNESCO (2014) estimates, the gross enrollment ratios for tertiary education were 78.6 % and 63.2 % for Argentina and Uruguay respectively around the year 2010. The same ratios were 27 % for Mexico and 33.3 % for Dominican Republic.

their families. In some cases, such as Mexico, El Salvador and Dominican Republic, we see an increase in the participation of return migrants—especially men—in their thirties and forties.[17] That this is clearly seen for men and not for women reflects again the sex selection of return migration. In addition, a change of government may promote a return migration among adult refugees settled in neighboring countries; that would be the case for Guatemala and Nicaragua, among others (Prieto 2012).

International Migration and Its Interaction with Family Dynamics as Seen Through the Age Composition of the Stocks and Flows

Although the theoretical frameworks of migration have incorporated households as the site of decision-making, we still analyze human mobility based on what individuals do, using at the most the household characteristics as one of the components that influences individual decisions and actions. The age composition can tell us a little bit more about how families move and about the interaction between family formation and international migration. If most of child migration is linked to that of an adult (father, mother or other relative), migrants may be moving more often with their children in some of the less developed regions where their participation in the stock is higher.

To understand what the age composition of the flows is telling us about international migration and its interaction with family formation and family dynamics, we need to consider the timing in the transitions of the life course in the sending society. For example, an early migration—in the late teen years—may be occurring before migrants have started their own families and may be linked to leaving the parental home for the first time. In those cases, when migration is more permanent than circular, migrants may be starting their own families in the destination setting.

When migration occurs later in the adult lives—in the late 20s or early 30s—the decision to migrate may be linked to the economic pressure of sustaining young children and an expanding family. Such an interpretation is consistent with the case of Mexico, where the age at marriage and at arrival of the first child is still below 25 for both men and women (Lindstrom and Giorguli 2002, 2007; Giorguli and Angoa 2013). In such cases of delayed or older migration, we may see families endeavoring to remain together in the origin. If we think that families prefer to stay together (Lindstrom and Giorguli 2007), there will be a strong incentive to reunite in the destination, encouraging other family members to later migrate to join the primary migrant—especially if migration policies allow or favor family reunification—or for migrants to return to their countries of origin later in their life course.

As seen in the example for Latin America, the age where outmigration peaks varies greatly within the region. In countries like Argentina and Uruguay, where forming a union and having children occur later in the life course (in the late twenties and early thirties), we observe outmigration later in the adult life compared to other countries with earlier marriage and parenthood patterns (such as Mexico and some of the Central American countries). This remains as a topic for further study. We need to systematically analyze how different age profiles in migration flows reflect different migration experiences, not only regarding family formation but also other aspects such as integration in the receiving society.

In the debate about gender and migration, the sex distribution by age gives us additional information. Different age patterns or peaks in international migration for men and women may indicate that the decisions to move occur at a different life cycle stages. In the Latin American case, for example, we see countries with a peak for male migration in the late teen years (15–19). In those cases, migration may be seen for some as a *rite de passage* to adulthood, expected of young men in communities with a high prevalence of international migration (Parrado 2004; Zenteno et al. 2013). Another example concerns return migration; the analysis of the flows corroborates the sex selectivity of return migration during the

[17] For the Mexican case, see also Lindstrom (1996) and Masferrer and Roberts (2012).

adult years (with women exhibiting lower rates of return), supporting the idea that migrant women may prefer more often settlement to return compared to men (Itzigsohn and Giorguli 2005).

Finally, for some regions we saw an aging process in the stock of migrants. In most of the cases, the growth of the population 65 and older in the migration stocks is linked to the settlement of migrants arriving in the prior decades. The implications of this aging process need to be studied in the particular settings of destination; the undocumented or documented character of the older migrant population, their access to health and other public services, whether they had pensions or other benefits derived from their labor experience at the destination and their family situation (considering possible caregivers and economic support from other relatives) will mediate the possible implications of this aging process.

International Migration, Marriage and the Family Life Cycle

Migration, Marriage and Gender

Even if mainly economically driven, international migration always interacts with decisions regarding family formation—for example, with starting or ending a union or having children—and with the stage in the family life cycle. The causal relation between migration and family formation can be traced both ways. That is, family transitions may encourage or hinder the international mobility of an individual depending on his/her sex, position within the household and age. At the same time, family adaptive responses to the mobility of one of its members may result in changes in the household arrangement, accelerating or delaying decisions regarding the start of a union and/or influencing the timing and number of children (Massey et al. 1990; Lindstrom and Giorguli 2002, 2007; Agadjanian et al. 2011; Parrado 2004).

Characteristics of the context such as the sex balance, nuptiality patterns (age at first marriage, type of unions, prevalence of divorce or union dissolution and remarriage patterns, age differentials between wife and husband, among others) and gender norms around the start of a union (for example, regarding the courtship period, the participation of parents and spouses in the decision of who and when to marry, dowry traditions, residential arrangements of the newly wed) in the countries of origin and at destination define how international migration, gender relations and family formation are interwoven.

For example, evidence from different regions of the world shows contrasting effects on gender inequality for those marrying a nonmigrant in the country of destination (Esteve et al. 2011; Domingo et al. 2014; Bélanger and Linh 2011; Bélanger et al. 2010). In general, migrant women are more likely to out-marry than men and intermarriages are more common in developed regions (Esteve et al. 2011; Domingo et al. 2014). Regardless whether it is an arranged marriage (such as those documented for East Asia)[18] or not, this kind of unions may transform gender and power relations in the communities of origin and destination. Foreign brides, usually daughters, may experience enhanced power and status at home when sending remittances (Bélanger and Linh 2011). Compared to other migrants, female migrants that marry native men will have more favorable conditions to enter the labor market in the receiving society. However, they also reproduce more often traditional gender roles as reflected by their lower labor participation rates (Domingo et al. 2014).

Similar to the paradox that Saskia Sassen refers regarding the gains in gender status and the reproduction of inequalities for women participating in the global labor market, there are tensions around marriage migration and its impact on women's status. Among some migration groups, women report less gender inequality at the communities of destination compared to their sending communities. That would be the case for Asian women migrating to other Asian countries or to the US under the scheme of arranged marriages (Bélanger and Linh 2011;

[18] Bélanger and Linh 2011 and Bélanger et al. 2010.

Esteve et al. 2011) and of Latino and Eastern European women in South America and Spain (Roca 2014; Serges and Temporal 2014). At the same time, they may face situations and vulnerabilities where gender inequalities are preserved or even enhanced.[19]

The patterns in union dissolution give us another example of how international migration interacts with gender ideologies and family models. Often, the dissolution of a marriage implies that women must support themselves and their children. Evidence from Latin America and the Philippines suggest that the access to resources and economic independence through their own migration empowers women to escape from situations of domestic violence and opens options to end a union that may not be available or permitted in their countries of origin (Cavagnoud 2014; Zlotnik 1995). In addition, migration may be a way to face the stigma attached to a divorce in the regions of origin. Zlotnik (1995) also found that separation or divorce were more likely to happen among Filipino women upon return to the community of origin as a result of women's gains in self-assurance and economic resources.[20]

International Migration and the Family Life Cycle

The way that international migration interacts with the family life cycle will vary depending on the mobility patterns (who moves, how far and for how long, and whether the family stays together or is separated by the migration of one of its members) and the gender and generational norms that organize the distribution of roles and responsibilities within the household, among other factors.[21] A way to approach to the link between the family life cycle and migration is through the analysis of the dependency ratio (Lindstrom and Giorguli 2006). During the first years of family building—after the arrival of the first children and through their school years—families may face more economic constraints and the mobility of one or more of the adults may be undertaken as a strategy to assure the income needed for family maintenance. Nonetheless, it is also a stage with a high demand of childcare supervision and caregiving—factor that may restrain the labor participation and/or mobility of one or more of the adult members. If we assume that families prefer to stay together during the first stages of the family life cycle, then we can anticipate that the migration that separates families responds to resource constraints and that there will be a strong incentive to bring the family together at the places of origin or destination.

In their study of Mexico-US migration during the eighties, Massey et al. (1990) found that for a model of male dominated migration, circular and in a context of a traditional gender division of labor within the household (rural settings), the male breadwinner would have higher probabilities of migrating with the arrival of the first children and during their school years. Migration would decrease as children grew older and leave the parental home (see Fig. 25.6). This inverted "U" relation between the family life cycle and migration may be useful to explain this particular setting of men's migration within a context of women remaining behind and fulfilling the traditional roles as homemakers. Lindstrom and Giorguli (2006, 2007) show that, within this same frame, women's migration remains low and there is a "U" relation with the family life cycle, the opposite of what we can expect for men

[19] The cases of foreign brides in Taiwan and South Korea (Bélanger et al 2010) illustrate situations where husbands forbid women to work, restrict their mobility and constrain their participation outside the house.

[20] The scenario may be different for male-dominated migration flows. Women remaining behind may stay under the supervision of other relatives and may face the strain and negative consequences of the non-return of migrant husbands (for the case of Mexican migration to the US, see Frank and Wildsmith 2005 and Rosas 2008).

[21] Normative aspects such as the migration policies in the receiving contexts and the legislation around family issues on both, sending and destination countries, also mediate the way families respond and accommodate to the international migration of one or all of its members.

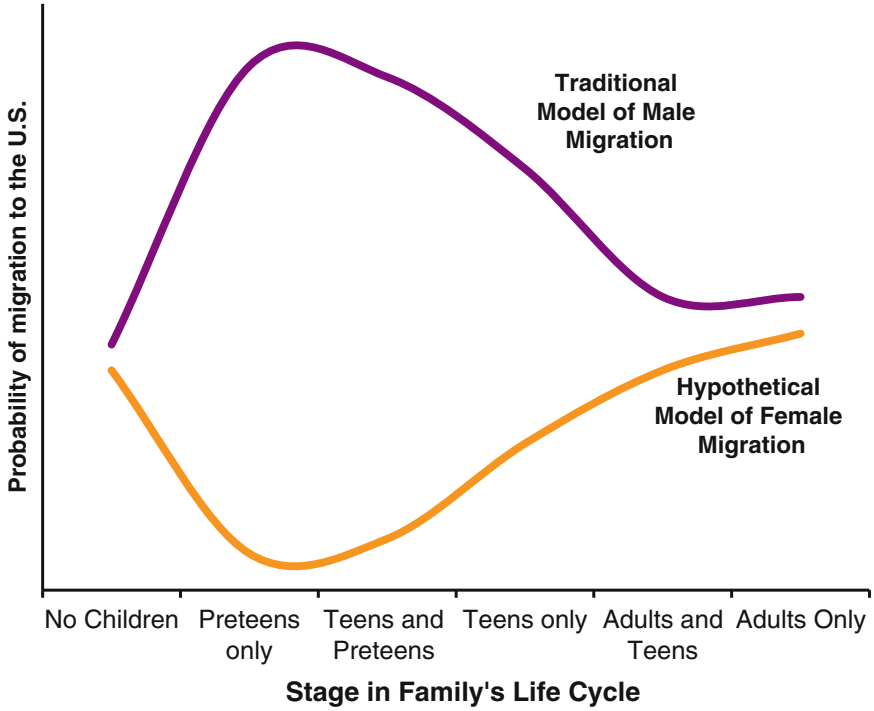


Fig. 25.6 Hypothetical model of male and female migration by stages in the family life cycle for contexts with a traditional gender division of labor (Sources: Based on studies on Mexico-US migration by Massey et al. (1990) for male migration and Lindstrom and Giorguli (2006) for both, male and female migration)

(see Fig. 25.6). The probabilities for women of migrating will be higher right after marriage and before the arrival of the children. As the number of children increase and during their early life, women's (mother's) mobility will decrease.

This model may be useful for a specific context. What we have described in this chapter is a heterogeneous scenario around the participation of men and women in international migration. To begin with, the feminization of survival circuits and the increasing labor participation of women around the developing world modify the link between international migration and the family life cycle, particularly in the model for female migration. For example, some of the studies cited along this paper for Latin American and Caribbean migration within the region and to Europe documented the participation of women with young children in the flows (Domingo et al. 2014; Cavagnoud 2014; Serges and Temporal 2014; Pedone et al. 2014; Hondagneu-Sotelo and Ávila 2003, among others). Most of the women in these scenarios overtake the role of main economic providers as a response to the labor uncertainty of the father or due to his absence. It is possible then that the deterrent effect of the presence of young children on women's migration has decreased, especially in contexts where the reliance on extended kin is common and accepted and where other relatives are willing to take over the care and supervision of children remaining behind. In addition, in some cases there may be the expectation of bringing the children with them or bringing them later –depending largely on the policies regarding family reunification and the resources available to migrant women at the country of destination.[22]

[22] Aside from the legal situation of female migrants in the countries of destination, other factors that may influence the decision to bring children along are the socioeconomic and dwelling conditions, the access to education and other public services, the possibility of organizing childcare during the mother's working hours and the social networks (other relatives or friends) available at the destination.

For the case of the recent increase in the flow of Latin American female migrants to Spain, Domingo et al. (2014) found two different patterns. There is a group of young women migrating before getting married. Among this group, along with migrants from other regions such as Eastern Europe, there is a high proportion of women marrying Spanish men after their arrival. The experiences at the country of destination will be different from that of the other women who migrate later in the family life cycle, are more often married or separated before migrating and have children that remain in the countries of origin.

Finally, return migration also occurs at different stages in the family life cycle. Prieto (2012) found that men from Latin America tend to return later in their adult years, but before the retirement age. For the recent pattern of return migration from Spain to the sending Latin American countries, different studies report a complex pattern of step migration with husbands—especially those with a more vulnerable or unstable labor situation at the destination—moving back to the countries of origin either looking for other job options or as a strategy to face the high living expenses in Spain. Adolescent children also move depending on the family situation, resources and the educational and job options in the countries of origin and destination (Pagnotta 2014; Pedone et al. 2014).[23] Further research is needed to understand, on one side, how gender and generational relations work in the decisions around the migration strategies and the geographical accommodation of transnational families and, on the other, on how roles and responsibilities among the members of the household change due to this complex pattern of geographical mobility of the family.

Discussion

The research on gender and migration has rapidly increased in the last decades. Most of the studies focus on understanding how international migration may lead to changes in women's status and in gender relations, especially between spouses. However, the research agenda has also expanded to include other issues such as how gender norms and ideology influence migration patterns, how family formation and dynamics are transformed by the geographical mobility of its members and how power relations, roles and responsibilities within the household in receiving and sending contexts modify and are modified by international moves. With the new information generated at the country level and the increase in the country or case studies on different setting, the recent research illustrates a more heterogeneous scenario of migration patterns around the world, with emerging receiving and sending regions and with the incorporation (or greater visibility) of other actors in the migration process such as the extended kin and the children. In the final section of this chapter, we point out some aspects that we think will guide future research on these topics:

1. **Gender and the age and sex composition of migration stocks and flows.** Today we have more and better information on the composition of migration stocks that allow us to do comparisons among countries and to look separately at regions of origin and destination. This information has been used to add to the discussion on whether the participation of women in the flows and stocks has increased. The "feminization of migration", understood as a growth in relative and absolute terms of women in international mobility, is considered to reflect the potential empowerment of women and their autonomous (versus the tied) participation in migration. As put forward in this chapter and in other recent studies, there is no clear evidence of the feminization of migration. Nonetheless, the data shows a very heterogeneous scenario not only in terms of the sex composition of migration but also regarding the participation at different ages.

   The joint analysis of this distribution by age and sex in the flows and stocks can contribute to the understanding of how gender ideologies

[23] Mummert (2012) and Ramírez (2013) illustrate also a pattern of different geographical mobilities of parents and adolescent children along the family life cycle among Mexican transnational families.

and family systems mold and are transformed by migration. The experiences regarding changes in gender relations, for example, may be different for young unmarried women compared to that of older women—married or separated—with young children who remain in the countries of origin. A similar argument can be constructed for men; the way international migration reinforces or changes men's perceptions around gender relation and women's status will vary by the age and family situation (including marital status and whether they have children or not) of male migrants. We need more information such as the family context before and after migrating, school attainment, labor status. However, even with the limitations on the information available, there is space for further research and new hypotheses about the links between gender relations, family systems and international migration using this type of approach.

2. **Bringing men in to better understand how international migration and gender relations are linked.** As mentioned earlier, most of the studies on international migration and gender are women-centered. They concentrate, predominantly, on the relation between spouses and, when referring to intergenerational relations, to fathers and daughters. The feminization of survival circuits and the increasing participation of women in labor markets also inform a change in the roles of men in family maintenance. In addition, the recent economic crises in some of the receiving countries have made evident the more vulnerable situation of unskilled male migrants as shown by the higher unemployment rates of migrant men compared to women. Men's traditional roles may also be changed by the geographical arrangements of transnational families. In the literature review there is more emphasis on how women's ideas about gender roles may be modified by migration and how the greater access to resources may lead to gains in their status in the family and in the communities of origin. We know less about the way men—husbands and sons—readapt to the potential changes in the organization of roles and responsibilities.
3. **Gender and generational relations.** Bringing a family perspective into migration research allows considering, not only changes in the gender relation between spouses depending on their own migration experiences but also the transformations in the relations, the participation in decision-making and the distribution of responsibilities among generations. The literature on transnational families shows the participation of grandparents as caregivers of children remaining behind, changes in parent-children relations due to their geographical separation and new arrangements and conflicts between parents and adolescent children in the receiving contexts. Generational relations and how they change will also be related to the gender norms and ideologies in the sending and receiving countries.
4. **Gender, families and migration policies.** Migration policies are linked to the sex and age composition of the flows and to the greater or less prevalence of family reunification in the countries of destination. Prior literature has pointed out that still today some of the migration policies are based on a perception of women's mobility tied to that of men—as wives or daughters. There is space for further research on how migration policies result in specific family geographical arrangements based on the different experiences and legislations in the receiving contexts. Furthermore, we can expect that the policies—regulating the entry of other family members and the access to public services, for example—will mediate how family organization and dynamics across the borders are transformed by international migration.

Acknowledgement We would like to thank Alejandra Rodríguez and Andrea Bautista for their collaboration in the organization of the references used for this chapter. We would also like to thank Michael White for his thoughtful comments and careful revision of our chapter.

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Urban Migration of Adolescent Girls: Quantitative Results from Developing Countries

26

Mark R. Montgomery, Deborah Balk, Zhen Liu, Siddharth Agarwal, Eleri Jones, and Susana Adamo

Internal migration is one of the fundamental processes by which poor countries transform themselves, with a well-recognized role in propelling national economic growth (Lewis 1954; World Bank 2009). It is equally significant in the lives of individuals. For all who migrate—girls and women, boys and men—the move marks a transition from one environment that is relatively familiar to another about which much may be unknown. In making the passage from the known to unknown, each migrant is likely to confront a range of risks and social dislocations, doing so in the hope of securing better life-prospects for the long term. Protection and safe passage are especially important for adolescent girls. The period from age 10 to 19 is fraught with risk yet also rich with opportunity, a time of multiple transitions when many girls leave their parents and natal homes for new surroundings.

This chapter draws upon quantitative evidence to develop a portrait of the developing-country adolescent girls and young women who migrate to cities and towns. The evidence comes in the form of a large number of well-standardized censuses and demographic surveys, which we supplement with studies of specific countries and regions. Many types of evidence are needed to illuminate girls' lives, but knowledge of the size of migration flows and their demographic composition is essential to understanding the scale of program resources required to reach girls in need, and to get a sense of where within a country those resources should be deployed.

The focus on urban destinations is justified in part by the remarkable demographic transformation that is underway world-wide. According to demographic forecasts, the countries of the developing world will grow by nearly 3 billion in total population by 2050, with nearly all of this growth taking place in their cities and towns (United Nations 2012). By 2030, the populations of rural areas are forecast to be on the decline. The lives of adolescent girls as well as other demographic groups will increasingly be lived in urban environments.

The more fundamental rationale, however, has less to do with demography than with

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*, International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_26

governance. Cities are important settings in which to consider adolescent girls because of their potential to connect girls to the resources that could provide both protection and opportunity. Cities are places where all manner of resources—capital, institutions, government—are concentrated. A well-governed city provides even its poor and newly-arrived residents with ready access to good schools, effective health care, and beneficial social services. But if a city's governance system bears little resemblance to this ideal, new migrants can find themselves socially excluded and unable to take advantage of resources that may be no more than a stone's throw away.

A Preview of Findings In synthesizing the evidence, we reach some conclusions that confirm commonly-held views of migration and others that challenge or flatly contradict these views. We confirm that in many poor countries, substantial percentages of urban adolescent girls (aged 10–19) are recent in-migrants, whether from rural villages or other urban areas. The percentages differ by country and data source, but credible estimates range as high as 40 % in census-based data and almost double that percentage in data drawn from demographic surveys. The empirical materials we use reveal no upward time trends in migration operating systematically either across or within most countries, despite what is often asserted in the literature on migration. (Time trends are evident in a few countries, to be sure.) An important finding is that in the majority of surveys, more urban in-migrant girls come from other cities and towns than from rural villages. Yet the literature hardly acknowledges urban-to-urban migrants, offering surprisingly few accounts of their experiences and needs.

The literature is often read to suggest that urban migrants live, disproportionately, in slums. We find, in some contrast to this common belief, that migrant urban girls are no more or less likely to live in homes with inadequate drinking water and sanitation than are urban non-migrant girls. In other respects, however, our findings are in closer agreement with the literature. Migrant urban girls often live in what would appear to be socially isolating circumstances. Most migrant girls are unmarried at the time of their move. After arrival, they are much less likely to reside in households headed by a relative, and they are also less likely to live with a mother, father, or spouse. As a group, young migrant girls have levels of education that exceed those of rural non-migrant girls, but which fall short of the education attained by non-migrant urban girls of the same age. Even so, a significant percentage of migrant girls are able to continue their schooling after arrival. For other migrants, the human capital assets they bring to the urban labor market are mainly those that they had acquired before moving.

In summary, in several respects the empirical findings of this chapter are at variance with a literature that has perhaps overly emphasized rural-to-urban migration and which has often asserted that migrants as a group are disadvantaged across the board. To understand what weight to give these findings, it is important to appreciate the weaknesses of the empirical evidence we examine as well as the strengths. It is fair to say that demographic data on migration are broad in coverage but thin in content. Population censuses cannot probe into the social and economic details of adolescent girls' lives, and may well undercount or miss entirely those girls who work as domestics or who live in marginalized circumstances. Much more could be expected of demographic surveys, which have greater scope for inquiry, but neither of the major on-going international survey programs—the Demographic and Health Surveys (DHS), sponsored by the US Agency for International Development, and the Multiple Indicator Cluster Surveys (MICS), sponsored by UNICEF—has ever made internal migration a data-collection priority. Indeed, the DHS has recently abandoned the two questions on migration that its surveys had asked for over twenty years, and the MICS program has never collected any migration information at all. As a consequence, although much can be learned about lives of adolescent girls and boys from these important survey programs, rather little can be learned about the specific experiences and circumstances of recently arrived migrants.

Organization of the Chapter This chapter is not the place for a detailed examination of within-country migration patterns and differences, which are complex and change over time even for a single country (Panel on Urban Population Dynamics 2003). Our aims are more limited: to examine a body of empirical evidence assembled from a wide range of countries and time periods, searching for common patterns (and significant exceptions to them) that would provide a frame and starting-point for country-specific investigations. It is mainly at the country level that decisions will be made about the policies, programs, and resources that are devoted to improving the lives of adolescent girls. The internationally comparable evidence presented in this chapter may be useful in setting the stage for a more intensive phase of within-country analysis.

The section titled "The demographic evidence" introduces the demographic evidence with which the chapter is concerned, noting several features that need to be borne in mind when drawing out the implications for adolescent girls. (The Appendix discusses migration definitions, measures, and selectivity biases in greater depth.) Section "Scale, origins, and time trends" presents findings on the age and sex patterns of migration, and investigates the origins of adolescent girl migrants. It closes with an examination of time trends. Section "Migration and marriage" explores the sequencing of migration and marriage. Section "Are migrant urban girls disadvantaged?" examines whether the evidence in hand indicates that adolescent girls who migrate to cities are disadvantaged in either material or social terms. Section "How migrant girls settle in" provides accounts of how migrant girls "settle into" their urban neighborhoods, drawing in particular from the qualitative research conducted in Indore, India, by Agarwal and Jones (2012). We then touch briefly in Section "Residential mobility" on what little is known of residential mobility in low-income countries. Section "Associations of the urban poor" explores the potential of one prominent form of urban social capital—urban women's groups and associations of the urban poor—to benefit newly-arrived migrants. These community-based associations figure hardly at all in most accounts of urban adolescents and migrant girls, but in much of Asia and sub-Saharan Africa, they have proven to be vital intermediaries—a type of bridging social capital—that have served to link poor urban-dwellers to the larger structures of government and civil society where greater resources are held than in the poor communities themselves. To be sure, urban poor groups have not generally regarded adolescent girls, in-migrants among them, as distinctive and significant members of their constituencies. But innovative adolescent programs are beginning to show how these community social resources might be marshalled for the benefit of urban girls. Section "Conclusions and recommendations" presents conclusions and research recommendations.

The Demographic Evidence

The analysis of this chapter relies heavily on census micro-samples provided by the Integrated Public Use Microdata Series–International program (IPUMS for short).[1] Each of these is a random sample of individual records from a national census, with the number of such records ranging from a few tens of thousands to many millions. We supplement the census data with survey data from the Demographic and Health Surveys (DHS) program, which compensate for smaller sample sizes by offering more socio-economic detail than a census can provide. The top panel of Fig. 26.1 depicts the 28 low- and middle-income countries that contribute 64 census micro-data samples to the IPUMS collection.[2] These countries span the range from the very low-income, least-developed countries

[1] See https://international.ipums.org/international/. We use the IPUMS samples available as of January, 2012.

[2] For India, the IPUMS data are derived not from a census, but rather from a large national-level employment survey implemented by the national statistical office, which is intended to complement the census. Since this is the lone exception, we will refer to the IPUMS collection as if it were wholly composed of censuses.

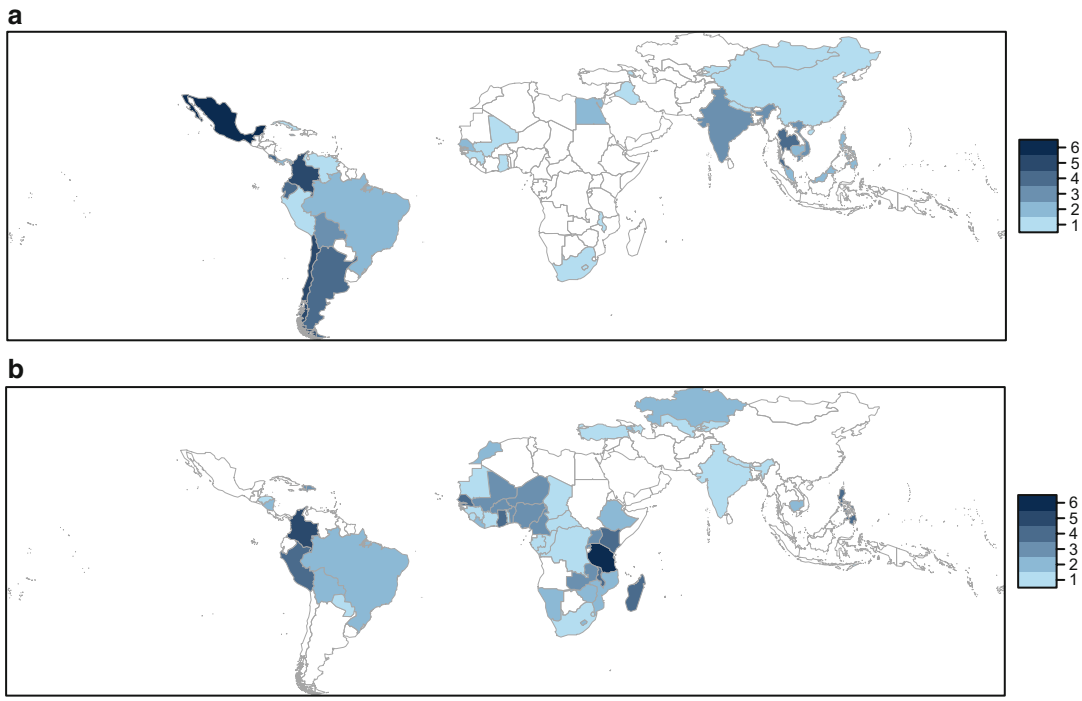

Fig. 26.1 Availability of census micro-samples (IPUMS) and Demographic and Health Surveys (DHS) with migration information, by country and number of censuses or surveys. DHS surveys are excluded if they were restricted to ever-married women (see the Appendix for discussion). (**a**) Countries with IPUMS census micro-samples. (**b**) Countries in which DHS surveys have been fielded

(Cambodia, Mali, Malawi, and Nepal) to middle-income countries such as Argentina, Malaysia, South Africa, and Brazil. Fifty-nine countries (bottom panel) have fielded DHS surveys with migration information (yielding 124 such surveys in total). As the maps show, these surveys are especially important in filling gaps in the record for sub-Saharan Africa.

The DHS surveys and the IPUMS-processed censuses provide an adequate basis only for the estimation of urban in-migration. That is, considering all urban residents at the time of the interview, we can estimate the percentage who arrived via migration in the preceding five years. (See the Appendix for discussion.) Seasonal migration is not detected, however, and both short-term and circular migration flows are apt to be seriously under-estimated. This is an unfortunate gap in the empirical record, leaving undocumented the seasonal and short-term moves undertaken by adolescent girls as well as other migrants. We are not aware of any systematic, cross-country assessment of these types of migration, and with a few notable exceptions (e.g., Hertrich and Lesclingand 2012), country-specific studies have seldom singled out adolescent girls for attention.

In comparing DHS-based to census-based estimates, the differences in their definitions of migration must be kept firmly in mind. A person who migrated to a particular city from another place in the same major administrative region would certainly be counted as a migrant in the DHS, but might or might not be counted as one in a census depending on its treatment of within-region moves. Likewise, a within-minor administrative unit move would be reckoned an urban in-migration in the DHS classification, provided that the move originated outside the city boundary, but it would not be recorded as a migratory move in an IPUMS-processed census. These data sources therefore provide two distinct measures of migration, each of which is meaningful in its own terms, but which cannot be compared on any

rigorous basis. This is not a mere technical detail. Policy-makers wishing to set adolescent girl programs on a solid base of evidence, using empirical data to inform decisions about the scale of the resources and the high-priority regions to which they should be targeted, will need to know that different messages may well emanate from different data sources.

The "move from where?" question also needs careful consideration. The IPUMS samples do not identify rural out-migrants as such, although they do identify the administrative unit from which the migrant originated.[3] The origin–destination pairs identifiable in the IPUMS are only defined for administrative areas. The DHS surveys add significant value in distinguishing origin areas according to urban–rural status, but these surveys do not identify the geographic location of the origin. It would not be difficult to craft a much-improved measure of migration by combining the better features of the census and DHS approaches, as we will discuss in the chapter's recommendations.

Scale, Origins, and Time Trends

Several decades of research have confirmed the existence of a pronounced age pattern in migration, with rates peaking in the early to mid-20s for both sexes. This pattern is so common as to have been enshrined in mathematical models of migration by age (see especially Rogers 1986; Rogers 1995). There is substantial variation across the world's regions in sex composition, with female migrant flows being especially prominent in Southeast Asia. Figure 26.2 for Cambodia illustrates the age and sex patterns that are broadly characteristic of this region. The top panel of this figure depicts the spatial basis of the migration estimates: it shows the major administrative regions of the country (provinces) and also indicates the locations of the cities and (large) towns in these provinces that offer a range of potential destinations for an urban-bound migrant.[4] In Panel (b) of the figure, in-migration percentages are shown for women and men by age and urban–rural location at the time of the 2008 census, with migration being defined as a move that crosses a provincial boundary. The 2008 census also gathered information on within-province moves, and Panel (c) shows the percentages of in-migrants according to this alternative definition. Allowing for within-province moves increases the peak migration percentage by some 7 points (for female migrants to urban areas), but leaves largely intact the regularities by age, sex, and location that are evident in cross-province moves. In Cambodia, the urban–rural difference in the prevalence of migrants is large, with much greater percentages of urban than rural residents (for both sexes) being recent migrants. Another pattern is evident in the figure that is much more general in the region and elsewhere in the developing world: Beginning about age 15, higher percentages of urban Cambodian girls than boys have recently in-migrated, with the percentages for girls remaining higher into young adulthood (age 24). At age 20, the percentages of young urban women who have migrated in the previous five years ranges from over 30 % to nearly 40 % depending on the definition of migration employed.

The Cambodia example thus illustrates two features of migration that, if not universal, are at least very commonly seen: higher in-migration percentages in urban areas than rural, and higher migration percentages for urban adolescent girls as compared with urban boys of the same age. We see just how common these features are via

[3] The rural–urban status of the origin area is identified in a small minority of censuses, but these data have not been included among the standardized variables supplied by IPUMS. The name of the origin region is made available in the standardized measures, and in theory it should be possible to characterize it as mainly urban or rural by using its composition at the time of the census. Unfortunately, the geographies released for current residence (given confidentiality restrictions) do not necessarily correspond to the geographies of the origin residence.

[4] These locations are estimates based on night-time lights satellite imagery analyzed in the Global Rural–Urban Mapping Project; see Balk et al. (2005) and CIESIN (2008).

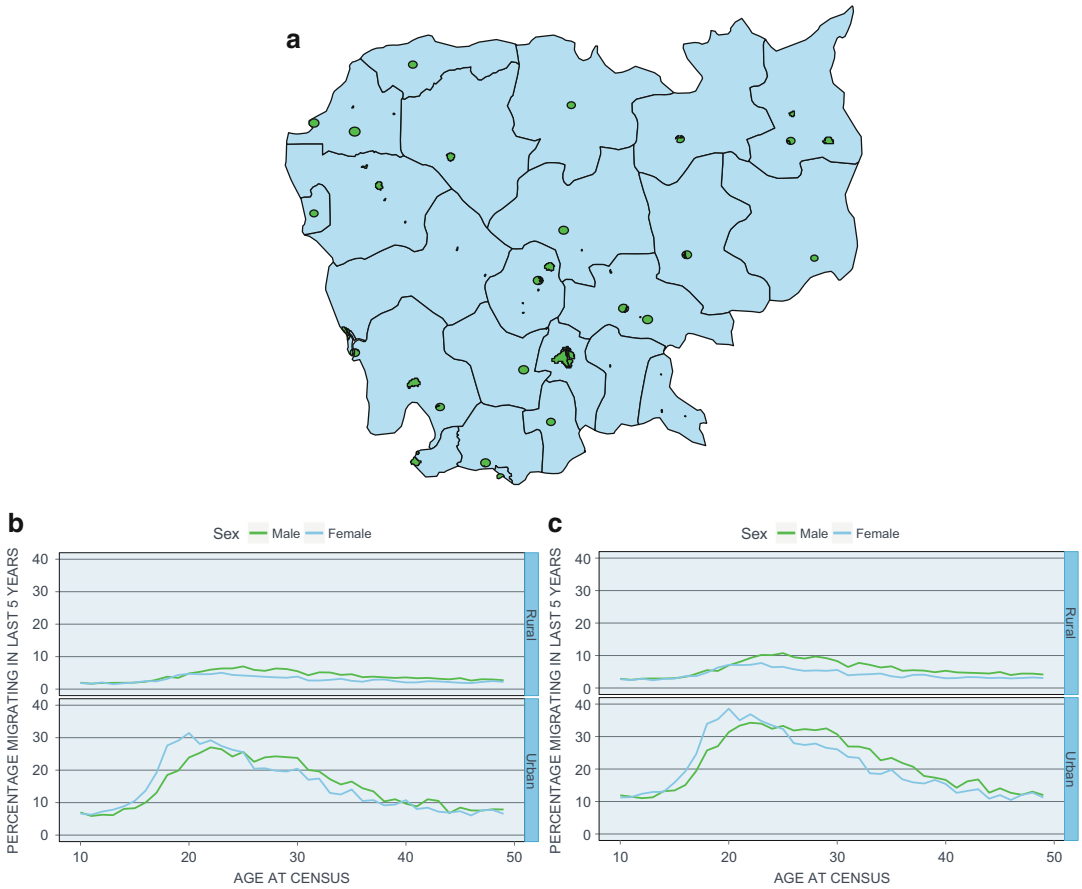

Fig. 26.2 Percentage of in-migrants by age and sex in Cambodia. Migration defined as a move in the previous five years. Panel (**a**) depicts the country's provincial boundaries and its urban areas as detected in night-time lights satellite sensors. In Panel (**b**), only moves crossing province boundaries—those shown in the top panel—are counted as migration. In Panel (**c**), moves crossing either province or "village" boundaries are counted in the definition (Source: Cambodia (2008) IPUMS sample)

Fig. 26.3, which focuses on girls and boys aged 15–19, both urban and rural, from the full range of IPUMS censuses. This figure presents three comparisons employing a graphical device that we will use throughout the chapter. Migration percentages for the group of principal interest (in Panel (a) of the figure, it is urban girls) are arrayed on the vertical axis and percentages for a comparison group (rural girls) on the horizontal. Each point represents a single census micro-sample. A diagonal line, angled at 45°, splits the graph: for any point falling on this line, the migration percentages of the two groups are equal. Points above the line are cases in which migration percentages for urban girls are higher; and for points below the line, migration percentages in the rural comparison group are higher. As Panel (a) clearly shows, much higher percentages of urban girls are recently-arrived migrants than is the case with rural girls. Panel (b) delivers precisely the same message for urban and rural boys.[5]

[5] Of course, the definition of migration as a move that crosses a province or similar boundary overlooks all within-province moves, which could be more common within rural areas. Figure 26.3 may therefore exaggerate the urban–rural differences that would emerge under a more inclusive definition of migration.

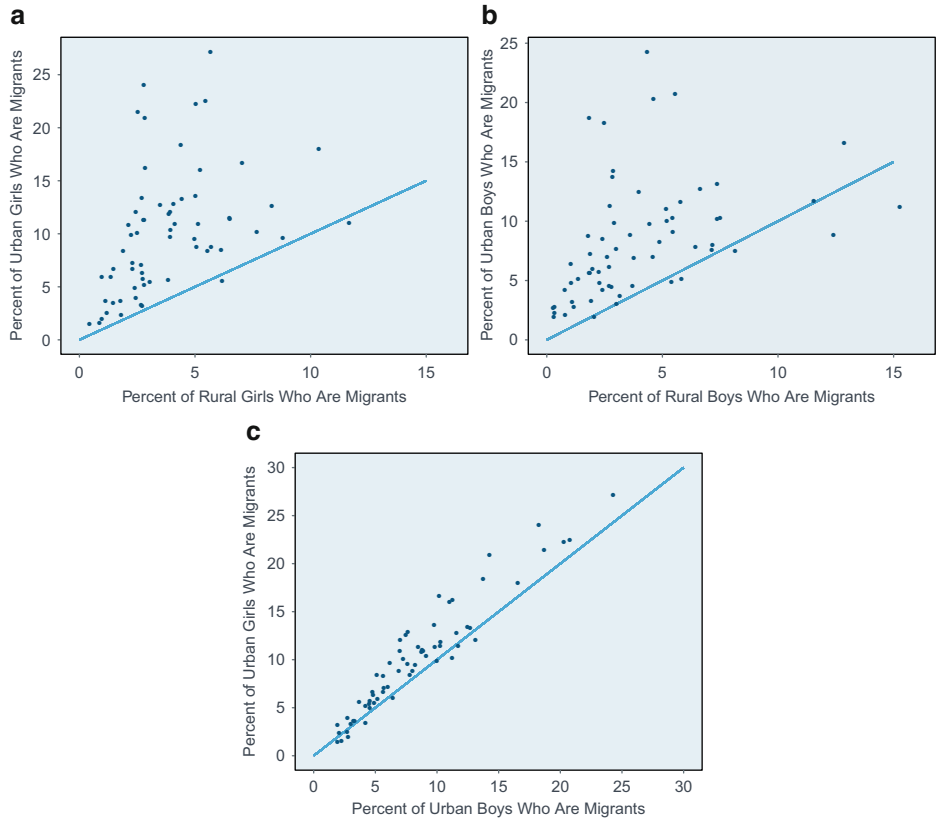

Fig. 26.3 In-migration percentages for adolescent girls and boys aged 15–19. Migration defined as a cross-province move or the equivalent in the previous 5 years (Source: IPUMS). (**a**) Urban and rural girls compared (**b**) Urban and rural boys compared (**c**) Urban girls compared with urban boys

As Panel (c) of Fig. 26.3 demonstrates, the female–male differences in urban in-migration seen in the Cambodian case are by no means limited to that country. In this figure, the in-migration percentages of urban girls aged 15–19 are compared with those for urban boys of the same age—with surprisingly few exceptions, urban girls are more likely than urban boys to be recently-arrived migrants. The girl–boy difference is evident in economies and societies as varied as those of Brazil, Colombia, Costa Rica, Ghana, Guinea, Malawi, and Mali. The gap between the sexes is not always large: for instance, the percentages are nearly identical in the most recent census available for Argentina (that of 2001, although larger differences were apparent in its earlier censuses), Malaysia (2001) and South Africa (2001). Bolivia (in its 1976 and 1992 censuses) is an exception to the rule of higher urban migration percentages for adolescent girls, as are the most recent censuses for Egypt and Nepal. But on the whole, the consistency of this pattern is impressive.

Considering only adolescent girls and young women, we find large cross-country differences in the levels of urban in-migration, with migrants accounting for only 5–10 % of urban girls in some countries but well over 20 % in others. The country differences are displayed by region in Fig. 26.4 for ages 15–19 and Fig. 26.5 for a comparison group of young women aged 20–24 years. The percentages increase with age: in the 2008 census for Malawi, for example, urban in-migration is estimated at 27 % for girls 15–19, and 38 % for young women aged 20–24. As was apparent in the case of Cambodia, the

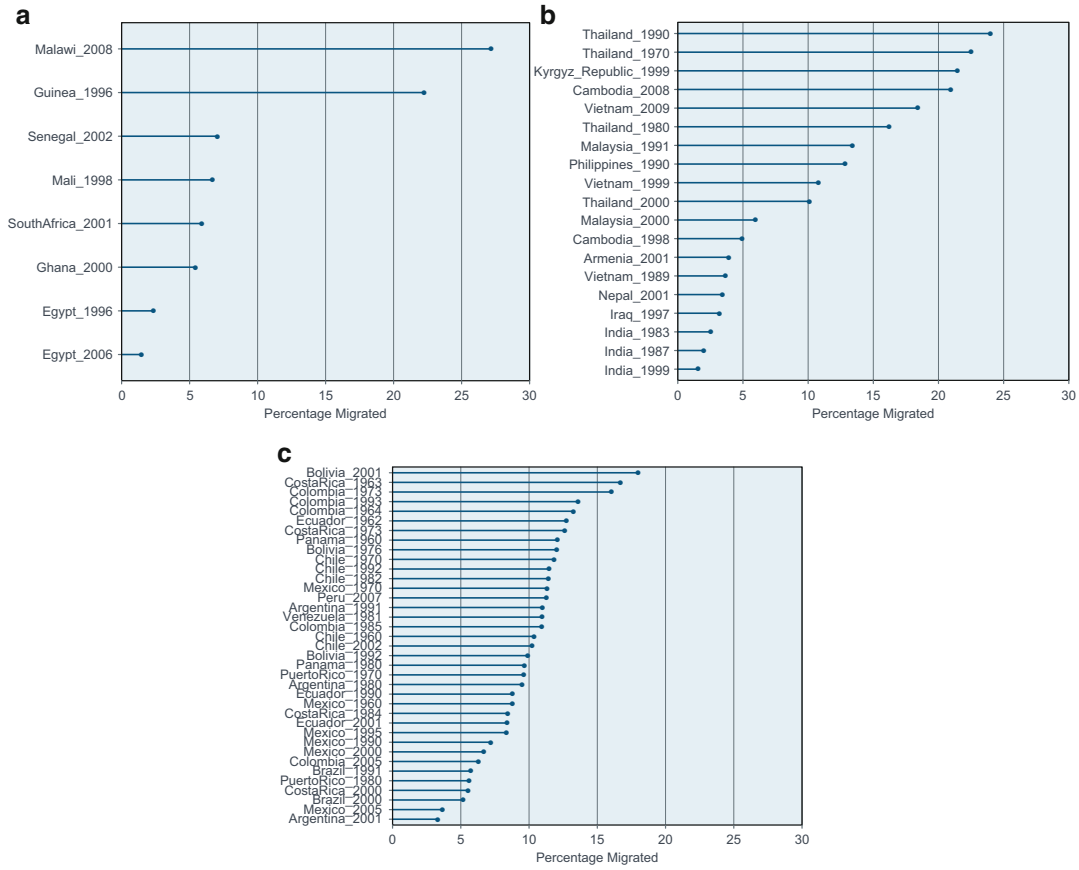

Fig. 26.4 Percentage of in-migrants among urban girls aged 15–19, by world region. Migration defined as a cross-province or equivalent move in previous 5 years (Source: IPUMS). (**a**) Africa (**b**) Asia (**c**) Latin America

percentages also depend on the definition of migration adopted. In India, only 6 % of urban adolescent girls are counted as migrants under a state-to-state definition, whereas when within-state, district-to-district moves are counted, over 15 % of urban girls are in-migrants (data from 1999, not shown).

The urban in-migration percentages recorded in the DHS surveys are generally much higher than the census-based figures, even for cases in which the census allows moves within minor administrative units to qualify as migration. The DHS–census differences can be seen in a comparison of Fig. 26.6 for African DHS surveys fielded since 2000 with Panel (a) of Fig. 26.4, which is derived from the IPUMS censuses. Taking the case of Malawi, for which 27 % of urban girls are recent migrants at ages 15–19 according to the 2008 census, the estimate for the 2004 DHS survey is nearly 60 % and a second estimate for a 2010 survey exceeds 40 %. A gap this large between the census and survey estimates must stem from fundamental differences in migration definitions.

Hence, we have two messages emanating from two authoritative sources of quantitative empirical evidence, yielding quite different estimates. The crux of the problem is not technical: it lies in the social implications of the different migration definitions. The census definition would put the focus on girls who have (generally) travelled longer distances in their moves, and who might therefore find themselves further from family and other sources of social support.

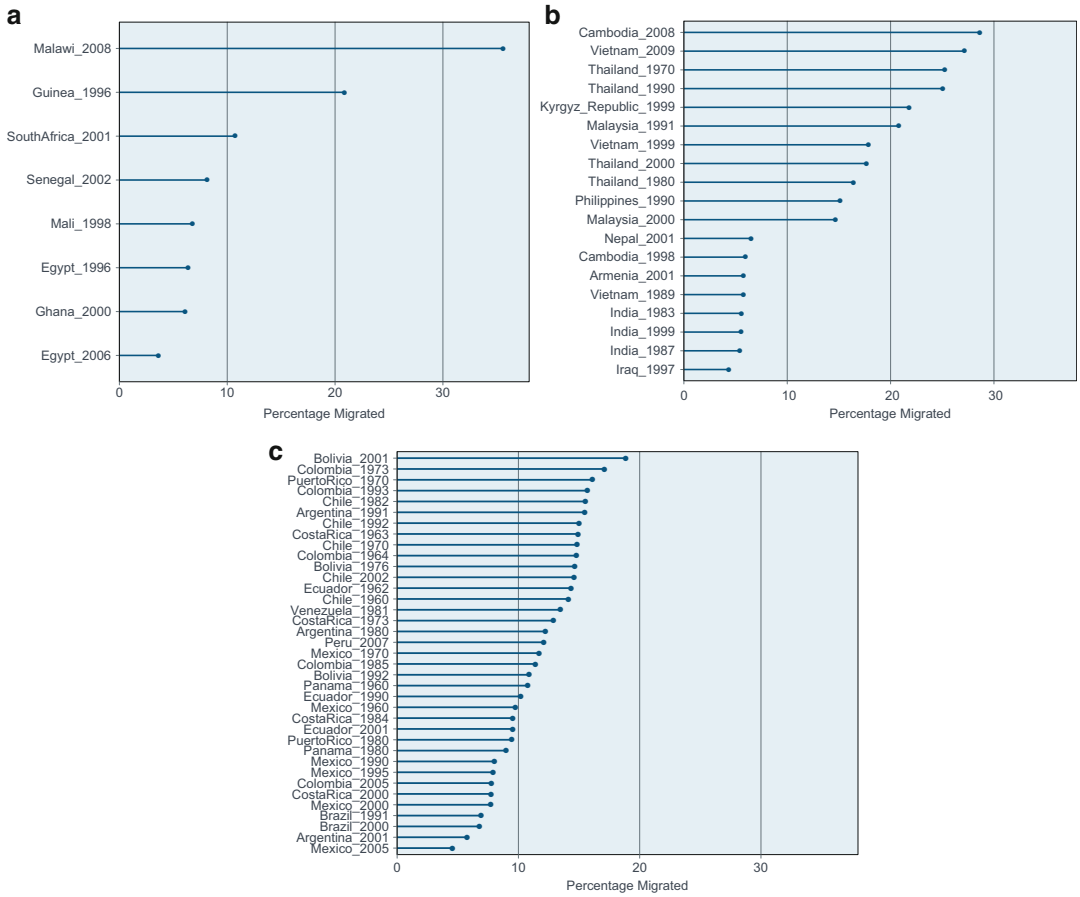

Fig. 26.5 Percentage of in-migrants among young urban women aged 20–24, by region. Migration is defined as a cross-province or equivalent move in previous 5 years (Source: IPUMS). (**a**) Africa (**b**) Asia (**c**) Latin America

Estimates based on the survey definition, which allows changes in locality to count as migration, are likely to involve more short-distance moves than figure into the census estimates. If distance travelled is a measure of social dislocation, then the census estimates might be regarded as more informative of the scale of potential need. But where migration is concerned, distance may be a very poor proxy for dislocation—a long-distance migrant might follow well-travelled paths along which many former residents of her village, ethnic group, or social network have made their way to the same destination. Indeed, a long-distance migrant might not have even contemplated such a journey without some assurance that she would find some of her familiars at destination. In short, quantitative evidence such as provided here does not speak for itself; for its meaning to be extracted and properly interpreted, it must be infused with knowledge of the local context.

Is Most Urban Migration from Rural Villages?

Much of the migration literature focuses on rural-to-urban migration, giving little attention to urban-to-urban moves. Rural-origin migrant girls may well be unfamiliar with urban life and may not know initially how to go about finding safe

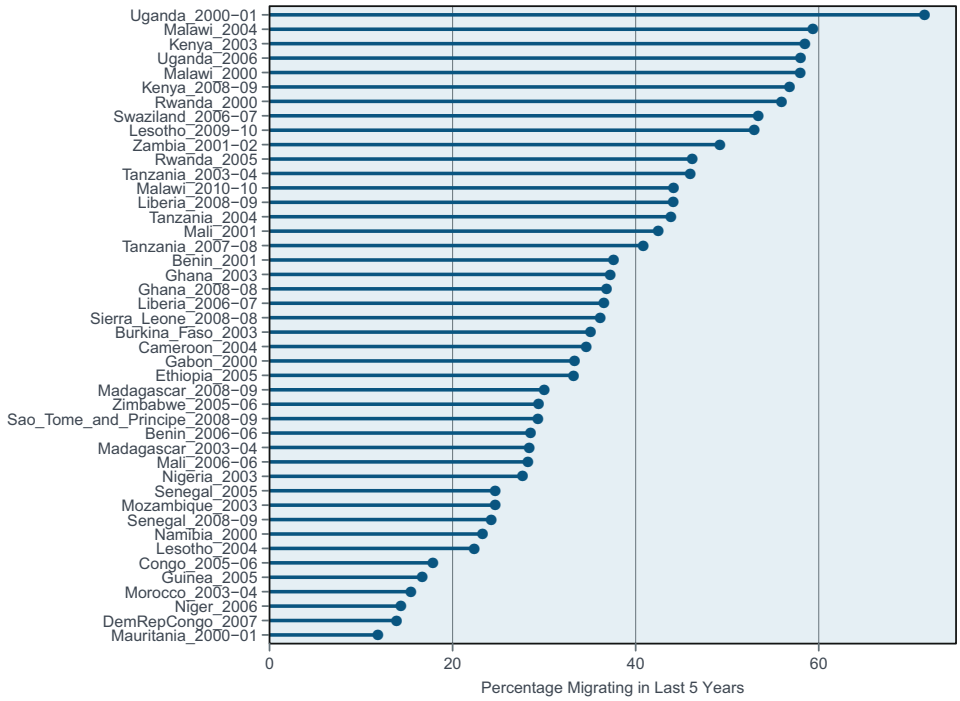

Fig. 26.6 Percentage of in-migrants among urban girls aged 15–19 in Africa. Migration defined as a change of locality in previous 5 years (Source: DHS surveys fielded since 2000)

accommodation, or how to locate adequate employment or health care. It is possible—although the literature is nearly silent on this point—that girls migrating from other cities or towns would experience a similar sense of dislocation. However, having already acquired something of what Barua and Singh (2003) term "urban literacy", these urban-origin girls might not experience social disorientation to quite the same extent. To understand how migration might be linked to social dislocation, it is obviously important to know the relative sizes of the rural-origin and urban-origin flows. Since very few censuses gather information on whether a migrant's origin area was rural or urban, we must turn to the DHS surveys to explore the issues.

Using data from a large set of DHS surveys, Fig. 26.7 summarizes the percentage of urban in-migrant girls who have arrived from rural villages. The survey-specific percentages are arrayed vertically, and situated horizontally according to the level of urbanization in the country as a whole, as recorded in United Nations (2010) for the year in which the survey took place. (As countries make the transition from predominantly rural to predominantly urban, the rural population share—the base from which rural-to-urban migrants come—shrinks relative to the urban share, and we would therefore expect a negative association to emerge between the country's level of urbanization and the percentage of urban in-migrants who come from rural villages. That association is clearly visible in the figure.) There are a number of DHS surveys in which more than half of urban in-migrants come from rural origins, but in most surveys it is the urban-origin migrants who are in the majority. This is often the case even at the relatively low levels of urbanization characteristic of sub-Saharan Africa and South Asia.

In light of the heavy emphasis on rural-to-urban migration that so marks the literature, these results need to be carefully assessed. If it were possible to include China in the calculations, where rural-origin migrants are believed to have outnumbered those from urban origins through the 1990s, the conclusion that

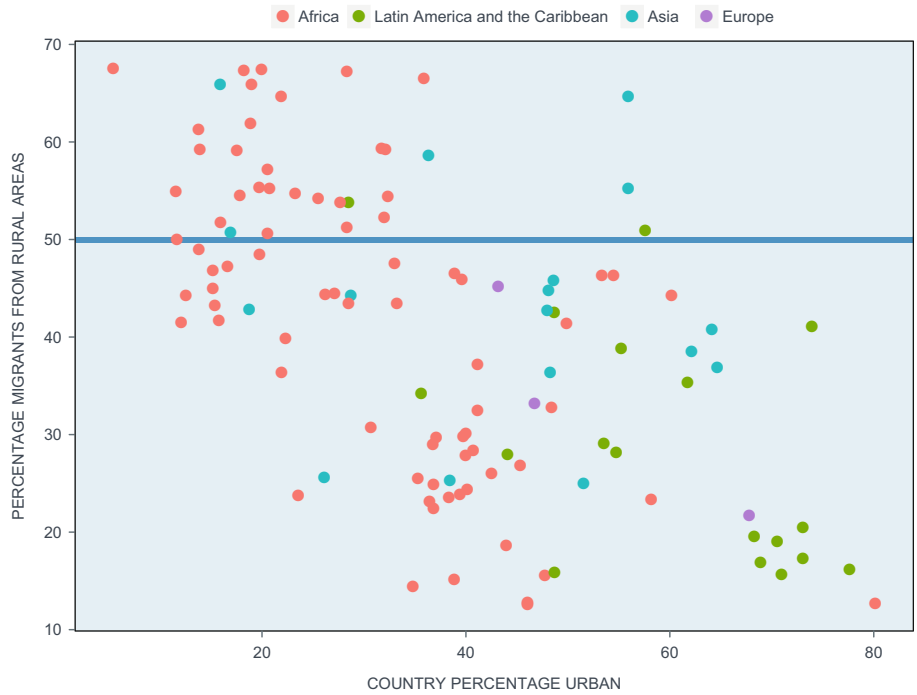

Fig. 26.7 Percentage of urban in-migrants who come from rural villages, girls aged 15–19. Migration defined as a change in locality (Source: DHS surveys)

urban-origin girls are in the majority would likely need modification for this country at least.[6] Is it possible that the way the DHS defines migration and collects information on previous residence somehow biases upward the percentage of urban-origin migrants? Recall that in these surveys, migration is produced by a change in locality; hence short-distance moves from just beyond a city's boundary would be recorded as migratory moves. It would seem likely that these nearby origin places are also apt to be urban. Bilsborrow (1998, p. 7) has conjectured that when asked about their origins, formerly rural respondents may identify their place of origin by the name of the nearest recognizable city or town. (We know of no evidence on this point.) Upward bias in the urban-origin percentages cannot be entirely ruled out, therefore, but the case for such bias is somewhat speculative. In the absence of more compelling evidence, we are inclined to think that the literature simply lags behind the empirical realities, and has been slow to recognize the importance of urban-to-urban migration flows.

Time Trends

The availability of censuses and DHS surveys for a wide range of countries and years provides an opportunity to investigate time trends in urban migration. Much of the migration literature suggests that migration is on the upswing, leaving the unwary reader with the impression that migration percentages are somehow known to be increasing with time. But apart from a few

[6] Yu Zhu, personal communication, and Jiang (2006), who finds that 60 % of China's "floating population" of migrants are from rural areas, as will be discussed later in this chapter. However, disparate findings emerge in detailed studies of migration to Chinese cities. Zhu (2006, Table 2) finds that for Shanghai, one of the world's largest urban agglomerations, about three-fifths of all migrants come from a different district within this vast municipality. In the 2000 census, these district-to-district moves are considered migration rather than residential mobility.

country-specific studies, these intimations of trend are seldom accompanied by evidence. Figure 26.8 arrays the IPUMS migration estimates by calendar year, singling out the countries with multiple censuses by connecting their estimates with a line to expose any trends that are underway. We see little here to support the notion of strong upward time trends. Indeed, for Latin America the impression given by these estimates is of mild downward time trends. A complementary exercise with DHS surveys (not shown) also yields mixed results with no persuasive evidence of upward trends.[7] The impression of increases over time may well stem not from any changes in the migration percentages, but rather from growth in the total number of migrants produced in part by population growth overall.

Migration and Marriage

In the absence of retrospective histories on migration and marriage, it is difficult to see how these two potentially life-changing events are linked. The census samples on which we rely can reveal whether migrants have ever been married at the time of the census, but generally do not ascertain the age or date of first marriage, leaving it difficult to establish the time-sequence of the two events. We must therefore turn to the DHS surveys for this information. These surveys collect month and year of marriage, which can be compared with the length of current residence (known only in terms of years of residence) to determine whether for girls who have both moved and married, the move clearly preceded marriage, followed marriage, or whether both events occurred in the same year but in an order that cannot be reconstructed. Figures 26.9, 26.10 and 26.11 present the results on the timing of events for urban in-migrant girls. For each surveyed country, the percentages are shown of girls who married before the move, at about the same time, and who moved while unmarried. As can be seen, it is in the last category—unmarried migrants—that we find the overwhelming majority of migrant girls in all of the countries. To be sure, in some countries (Mali, for example) a significant share of all urban migrants marry either before or at roughly the same time as marriage, but in no country does this group account for more than half of migrant girls.

The time sequence of migration and marriage does not in itself fully reveal how these two behaviors are related. Migration may be one phase in a longer-term strategy by which a girl prepares herself—in terms of the acquisition of skills and capital—so that when she does eventually marry, that transition takes place on more favorable terms than it otherwise would have. In a sense, then, a girl may "move for marriage" even if she is unmarried at the time of the move and remains so for a considerable period of time after her arrival.

If all else were held equal, a married migrant girl could count on having another adult close at hand who would supply both material and social support and offer a measure of protection, and whose presence would be expected to ease her own transition to urban life. But this is putting the issue much too simply, because not all else is likely to be equal. In many conservative societies, being married sharply restricts a young girl's autonomy, limiting her mobility, blinkering her view of her neighborhood and the urban world beyond it, and compromising her ability to take advantage of the opportunities that are nearby in a geographic sense. The fact that a girl is already married at age 15–19 may itself be a signal of deeper disadvantages that will continue to limit her opportunities in her new urban home. Although an unmarried migrant girl lacks the resources that a spouse can provide, she may find that this unencumbered status gives her an opening to pursue formal schooling or the informal equivalent and to acquire urban knowledge, deepen her

[7] To be sure, some caution is in order in interpreting the figure. The migration percentages exhibited here are urban in-migration percentages. They are not readily interpretable as guides to rural out-migration percentages. It is possible for constant or even rising rates of rural-to-urban outmigration (by which a constant [or rising] percentage of rural residents leave each year for cities and towns) to result in declining rates of urban in-migration. This is because the rural base providing such out-migrants steadily shrinks in relative terms as urbanization proceeds. Given this, Fig. 26.8 cannot be read as a definitive rejection of the proposition of upward trends in out-migration percentages.

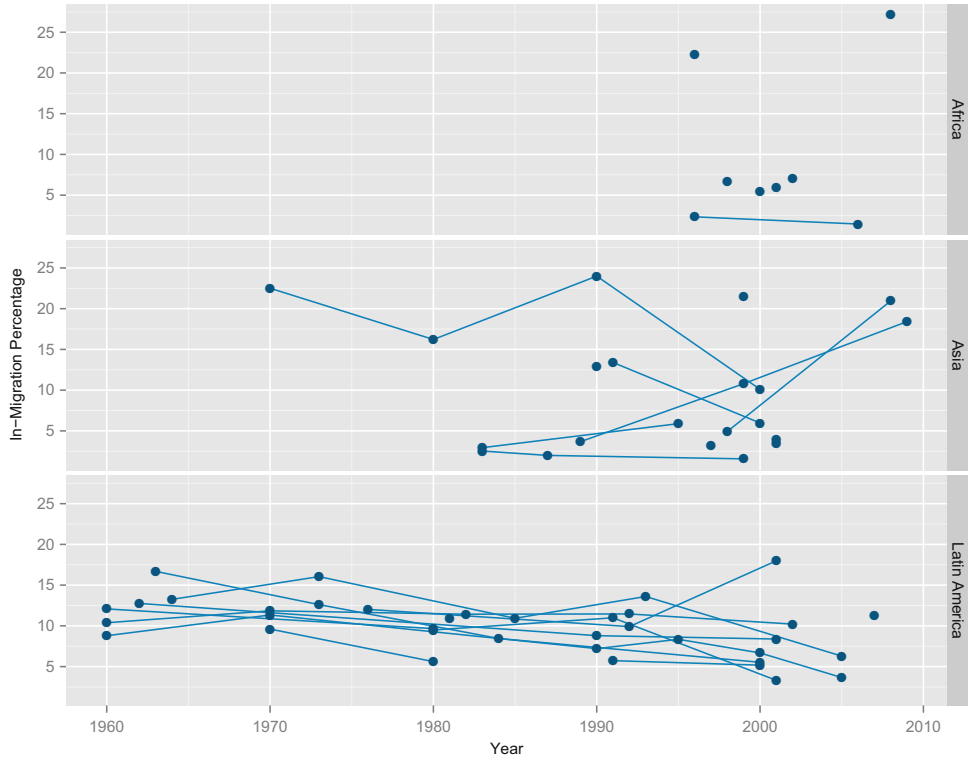

Fig. 26.8 Percentage of in-migrants among urban girls aged 15–19, by region and year of census. Data points for each country having two or more censuses are connected by a line to better reveal trends. Migration is defined as a cross-province or equivalent move in previous 5 years (Source: IPUMS)

sense of self, and amass other resources that might serve her well over the long term.

Indeed, in some settings, young migrant brides can face severe isolation when social constraints deny them the autonomy to move about the neighborhood and take part in its activities. As Agarwal and Jones (2012) recount for Indore (India), married in-migrant girls are

> vulnerable to a persistence of loneliness and feeling a lack of belonging; [their] social networks were completely transformed as they moved away from their natal families. . . . [They] are particularly vulnerable when they have poor [marital] relationships, autonomy and/or access to resources in their marital home. Despite living a short walking distance from the Anganwadi centre, one girl who [suffered from] anemia was discouraged from taking iron supplements and was not permitted by her in-laws to leave the house to visit the centre.

The family connections accessible to a married migrant girl depend in part on whether her husband is also a migrant. The Agarwal and Jones (2012) study of Indore observed that

> Non-migrant husbands typically had extensive family connections in the city while migrant husbands had fewer. Nevertheless, migrant husbands had typically joined family members living in the city themselves, particularly siblings, with whom they had stayed while unmarried. These family connections of migrant husbands played an instrumental role in supporting the new marital couple during the initial period before separate accommodation was found.

Are Migrant Urban Girls Disadvantaged?

A major theme in the literature on adult migration—see Panel on Urban Population Dynamics (2003) for an extensive review—has to do with whether, and in what ways, rural-to-urban migrants suffer from disadvantages in relation to a comparison group, which is usually taken either to be urban non-migrants or rural non-migrants. The conclusions about

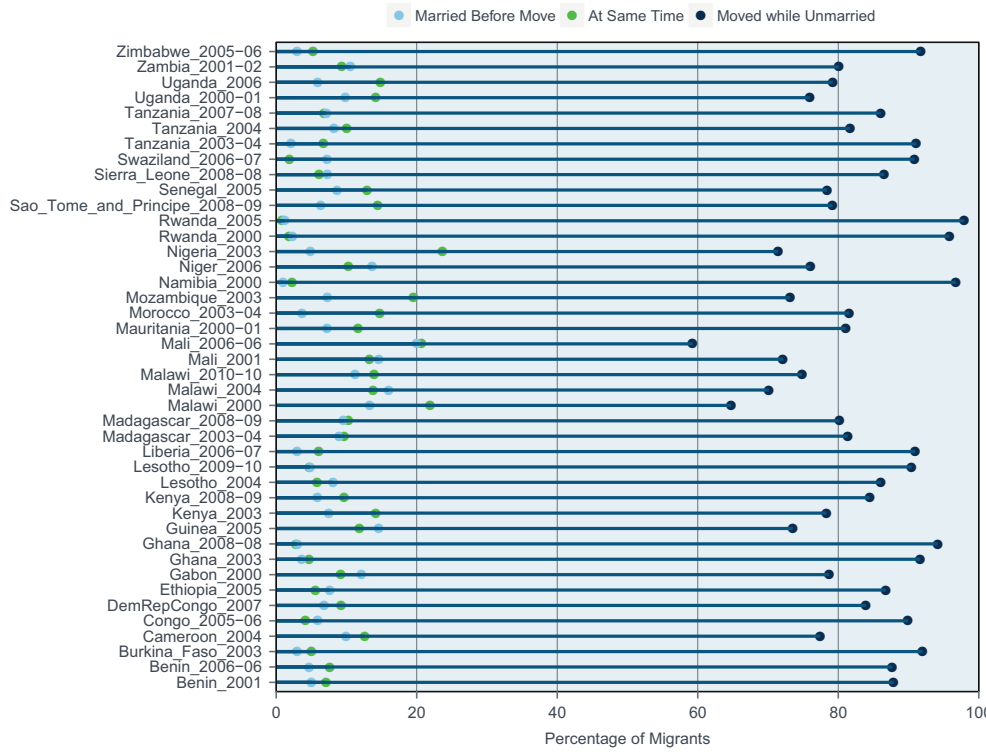

Fig. 26.9 Approximate timing of migration in relation to marriage for Africa, urban girls aged 15–19. Migration defined as a change in locality (Source: DHS surveys since 2000, excluding those restricted to ever-married women)

disadvantage depend on the comparison group and the measure of advantage or disadvantage being studied. For adult men, studies of wages and earnings commonly find that with other factors controlled, migrants do not suffer from detectable wage penalties after an initial period of adjustment to city life, and subsequently are often seen to out-perform urban non-migrant men.[8] The health and survival of the children of adult rural-to-urban migrants have been closely scrutinized in this literature. Although the health studies vary in emphasis, the Panel on Urban Population Dynamics (2003) identified a broad consensus that health penalties associated with migration, when they exist at all, are mainly confined to an adjustment period of two to three years following the move, after which the health of migrant urban children closely resembles that of non-migrant children. We can explore migrant disadvantages in access to public services, in measures of social support, and in schooling.

Access to Public Services

In keeping with Panel on Urban Population Dynamics (2003, pp. 176–77), we compare access to improved sources of drinking water and sanitation for migrant and non-migrant urban girls, using DHS data on access to these services.[9] Figure 26.12 compares service access

[8] Beegle et al. (2011) provides a recent example in this vein in which rural out-migrants from the Kagera region of Tanzania are compared on a longitudinal basis to rural non-migrants. Migrants record sizeable gains in living standards relative to the non-migrants.

[9] The meaning of "improved" is set out by the WHO–UNICEF Joint Monitoring Programme for Water Supply and Sanitation, which monitors country progress toward the Millennium Development Goals; see http://www.wssinfo.org.

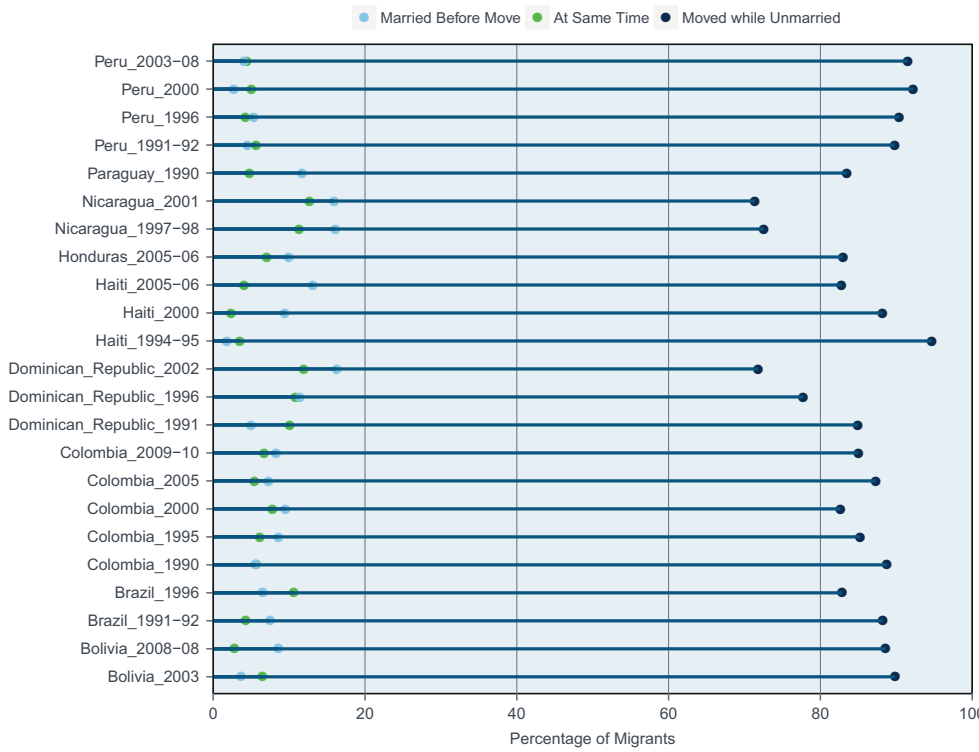

Fig. 26.10 Approximate timing of migration in relation to marriage for Latin America, urban girls aged 15–19. Migration defined as a change in locality (Source: DHS surveys, excluding those restricted to ever-married women)

in households with urban migrant girls aged 15–19 with households having non-migrant girls of the same age. (To put it more precisely, households enter this comparison when a girl aged 15–19 is selected at random for the DHS individual interview, as it is only through the interview that her migration status is determined.) The figure is designed so that points lying below the diagonal lines indicate that non-migrant girls are advantaged in terms of service access relative to migrant girls, whereas points above the lines give the advantage to migrants. Evidently, in neither service is there any systematic evidence of migrant disadvantage: the differences are generally small and roughly evenly distributed about the diagonal. In further work (not shown) we have investigated whether service differences emerge in comparisons among non-migrants, migrants whose previous residence was urban, and rural-origin migrants. The differences in access remain small and do not indicate systematic disadvantages even for the rural-origin migrants. To be sure, DHS surveys do not establish that the girl herself enjoys the same access to drinking water and sanitation as the other members of her household, but for drinking water, at least, it would be surprising if she did not.[10]

Migrants in general, and migrant girls in particular, are often assumed to be streaming into city slums—and this is not an unreasonable supposition given the immediate need of in-migrants for affordable housing of at least minimally tolerable quality. But careful accounts—e.g., that of Garau et al. (2005)— stress the great variety of

[10] In commenting on this chapter, Mark Collinson has observed that in southern Africa (where he directs research in Agincourt, a rural demographic surveillance system), it is the somewhat better-off rural families whose members migrate to cities and towns, from where they send back remittances and otherwise support the rural family of origin, thereby further improving its living standards relative to other rural families. He conjectures that these positive feed-backs may explain the lack of clear disadvantages seen among urban in-migrants.

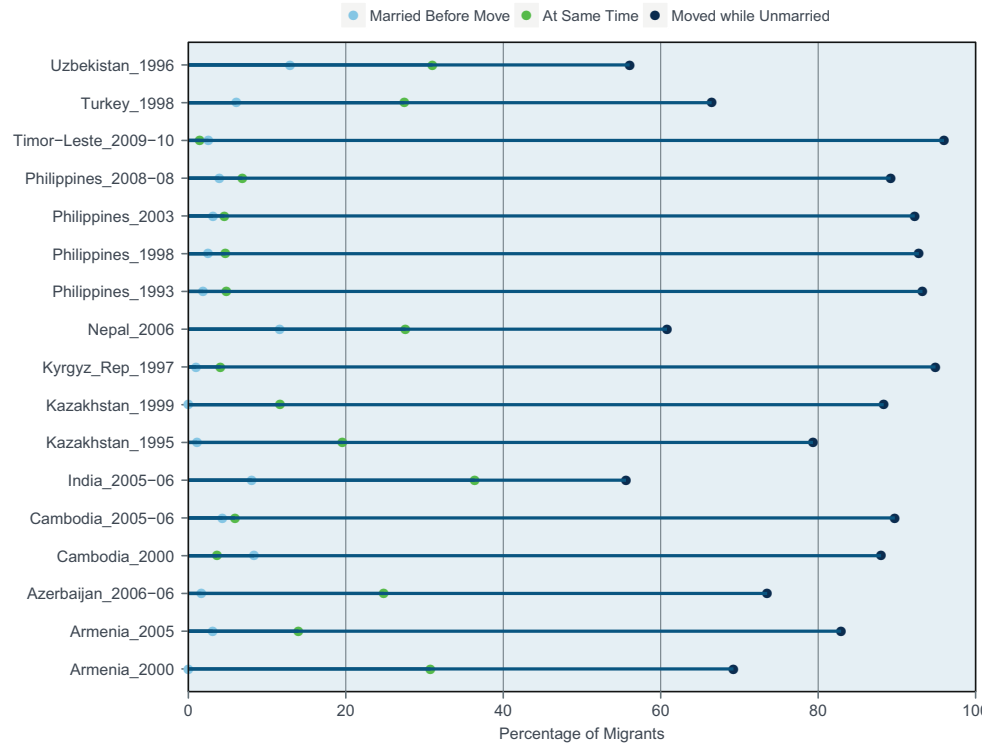

Fig. 26.11 Approximate timing of migration in relation to marriage for Asia, urban girls aged 15–19. Migration defined as a change in locality (Source: DHS surveys, excluding those restricted to ever-married women)

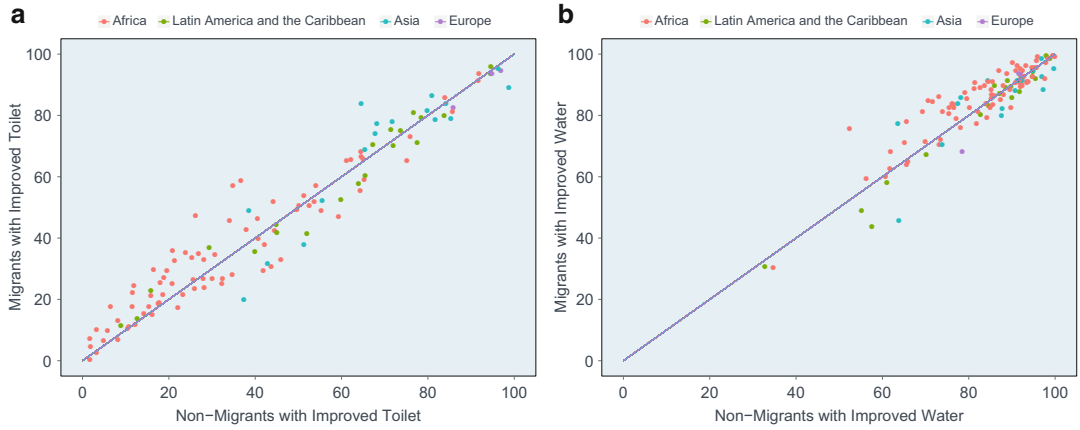

Fig. 26.12 Percentage of urban girls aged 15–19 with access to improved services, by migrant status and region. Migration is defined as change in locality over the previous 5 years (Source: DHS). (**a**) Access to improved sanitation. (**b**) Access to improved drinking water

urban housing and housing markets that could cater to migrants, and take pains not to suggest that migrants will direct themselves only to slums. As Fig. 26.12 has shown, recently arrived in-migrant girls live in households that generally possess the same access to improved drinking

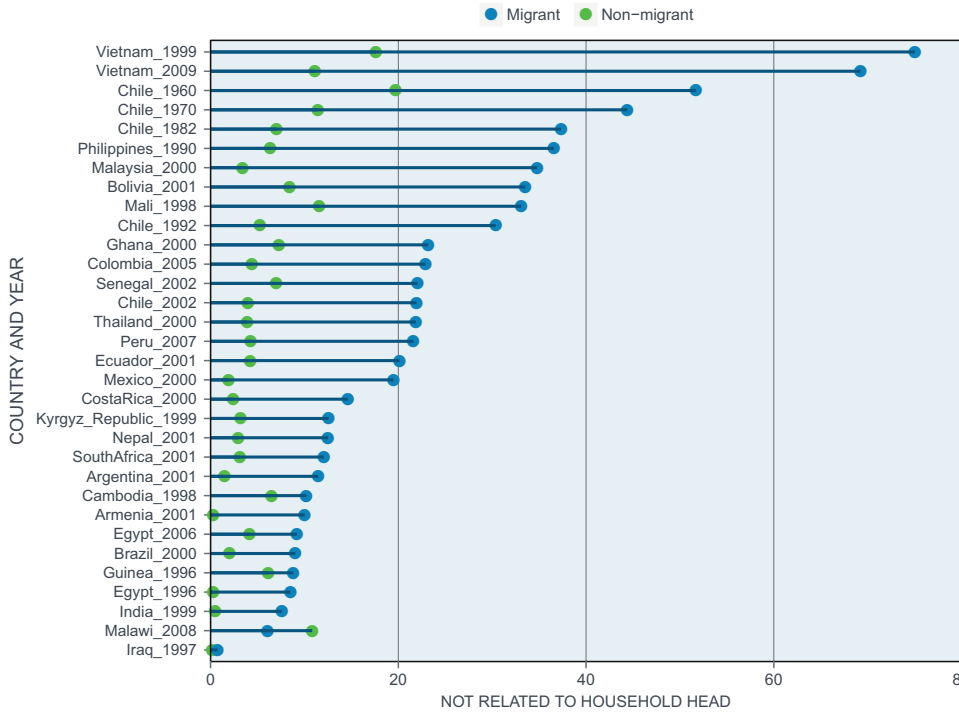

Fig. 26.13 Urban girls aged 15–19 unrelated to household head (or only distantly related), by migrant status (cross-province or equivalent movers) (Source: IPUMS)

water and sanitation as those of non-migrant girls. This finding is not easy to reconcile with the view that migrants disproportionately inhabit slums.

Access to Social Resources

Census data cannot detect the full extent of social isolation experienced by migrant girls, but can offer some measures that hint at it. Figure 26.13 depicts the percentages of urban girls aged 15–19 who are either unrelated to their head of their household, or are only a distant relative of the head. As can be seen, the migrant–non-migrant differences are typically quite large. Figure 26.14 touches on similar issues, showing the percentages of urban girls of this age who do not live with a mother, father, or spouse. For an adolescent girl, having close relatives near enough at hand to figure into daily life presumably provides at least a measure of protection, advice, comfort, and other forms of social support. Migrant girls must either find a way to do without these social assets or must locate them in other quarters not examined by the census, such as in networks of friends and work-partners.

Human Capital Assets

Where schooling is concerned, urban migrant girls are located mid-way in achievement between rural non-migrant girls and other urban girls. They have higher levels of educational attainment than rural non-migrant girls, as shown in Fig. 26.15, which depicts the differences between migrant and non-migrant girls at the two extremes of the educational distribution. Each point in the figure represents, for a given census, the percentage for urban migrants (on the vertical axis) and for rural non-migrants (horizontal axis), with age groups differentiated by color. Panel (a) depicts the percentages of

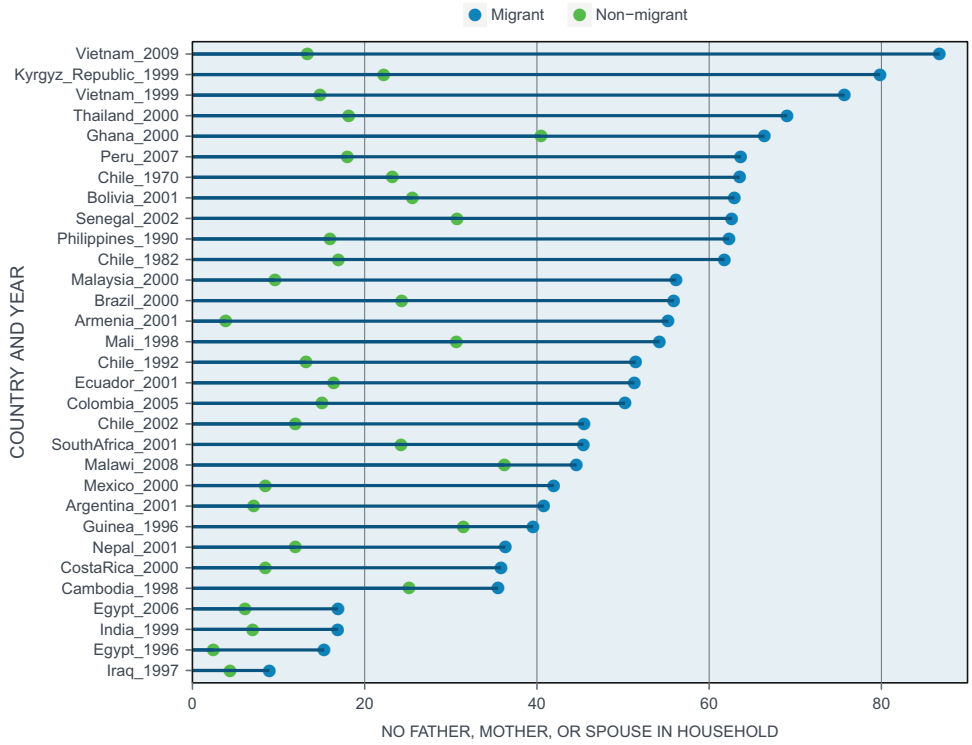

Fig. 26.14 Urban girls aged 15–19 not living with a mother, father, or spouse, by migrant status (cross-province movers) (Source: IPUMS)

girls who have completed no schooling at all, or have only gone as far as incomplete primary. (For the ages under consideration here—16 to 22 years—most girls have either ended their schooling or have progressed past primary school. Age remains a factor for secondary schooling.) A point situated below the diagonal indicates that the rural girls are more likely to have low levels of schooling than urban migrant girls of the same age—this educational advantage of urban migrants relative to rural girls is readily apparent. It is equally clear at the upper end shown in Panel (b)—attainment of any secondary schooling—in which urban migrant girls exhibit a decided advantage.

However, although better educated than their rural peers, urban in-migrant girls do not generally match the levels of educational attainment achieved by their urban non-migrant peers. Figure 26.16 shows that migrant girls are not as well equipped with human capital as other urban girls. Panel (b) of Fig. 26.16 displays the percentages of girls with any secondary or higher schooling. In this case, the relative advantages enjoyed by non-migrant girls are evident in the mass of points falling below the diagonal line.

These differences in educational attainment probably understate the advantages that non-migrant girls eventually acquire in terms of completed schooling, because non-migrant urban girls are decidedly more likely to be enrolled and continuing to build upon their educational assets. Figure 26.17 contrasts enrollment percentages for urban girls at ages 16, 18, 20, and 22, with the percentages for in-migrants again shown on the vertical axis and those for non-migrants (of the same age) on the horizontal. Each point depicts the levels of enrollment for a given census and age. Points above the diagonal line are those for which migrant enrollment percentages exceed the non-migrant percentages; points below the line indicate higher enrollments for the non-migrant girls. As can be seen, cases in which migrant

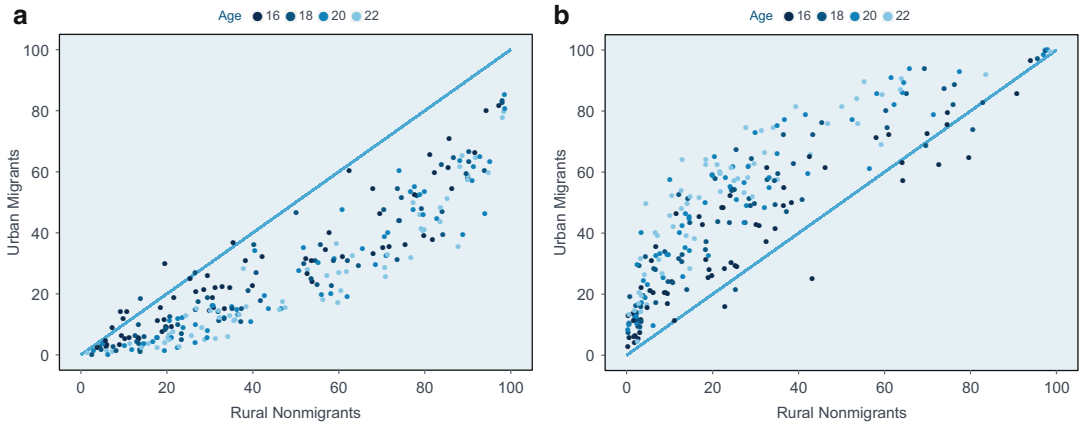

Fig. 26.15 Educational attainment of urban migrant girls and rural non-migrant girls, by age. Migration defined as a cross-province move or the equivalent (Source: IPUMS). (**a**) No schooling or incomplete primary. (**b**) Any secondary or higher

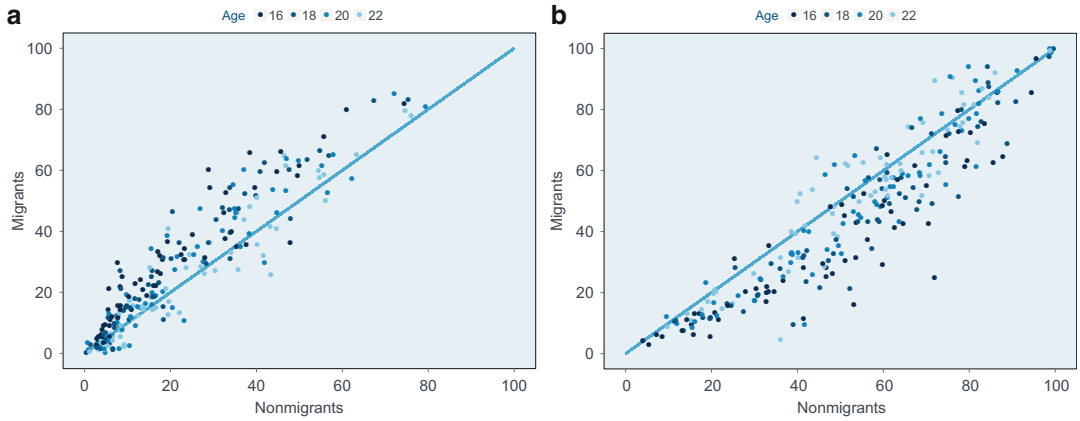

Fig. 26.16 Educational attainment of urban migrant and urban non-migrant girls, by age. Migration defined as a cross-province move or the equivalent (Source: IPUMS). (**a**) No schooling or incomplete primary. (**b**) Any secondary or higher

girls exhibit higher levels of enrollment are infrequent. In the great majority of these comparisons, migrant girls are less likely to be enrolled.

The same figure can be read differently, however. In most of the cases shown, substantial percentages of migrant girls do somehow manage to continue their schooling in their new urban environments. Twenty, 30, and 40 % school enrollment rates are clearly not uncommon for urban migrant girls. It is likely—if not provable given the data available—that for these girls, the transition in residence facilitates the acquisition of additional human capital.

The Indore study (Agarwal and Jones 2012) provides insight into what is entailed when a migrant girl attempts to enroll in school:

> Enrollment was a challenge for some girls: on making contact with a school in the city, girls and their families were asked for a range of documents, including certificates of their school results, transfer certificates, and case certificates for accessing scholarships. [The] implications included having to return to the village to obtain the necessary documents, paying bribes, or even

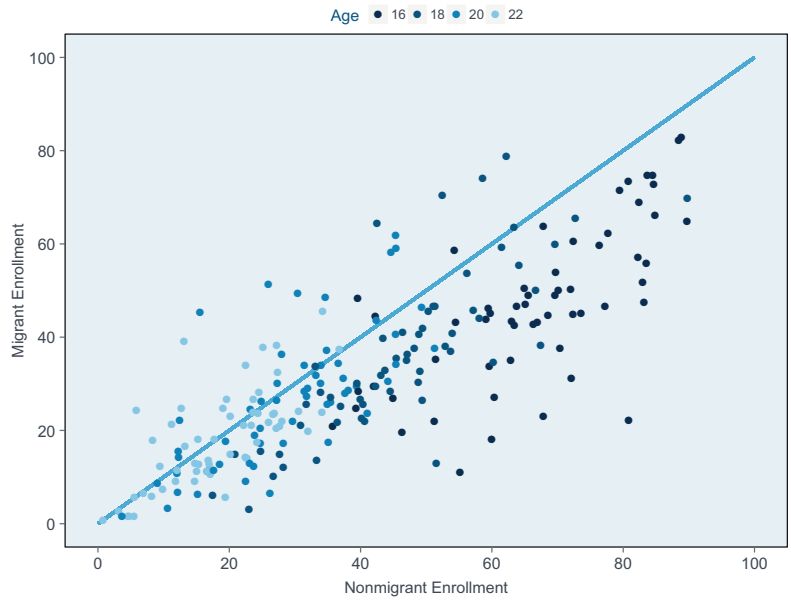

Fig. 26.17 School enrollment percentages of urban girls by migration status and age. Migration is defined as a cross-province or equivalent move in previous 5 years (Source: IPUMS)

> having to change the choice of school. . . . Girls could be entered into a class behind their age peers if they had not attained the required educational standards. . . . More serious implications . . . were that girls might not enroll for fear of being unable to cope with the [urban] education level, or enrolling to leave soon afterwards because they were unable to keep up with their peers.

These difficulties were especially apparent among girls who had not been to school in some time—the gap in their training made re-entry a challenge. In this setting, married migrant girls faced the additional problem of constraints on mobility and the need to secure the permission of the spouse and in-laws.

Is China's "Floating Population" Disadvantaged?

We lack access to recent census data for urban China, whose migrant population dwarfs the total populations of most countries—Zhu (2007) estimates it at 120 million—but can draw on the literature for guidance on the question of disadvantage. Jiang (2006) has employed a 1 % sample of the 2000 Chinese census to study the living conditions of the "floating population" of urban migrants, who are the persons living in cities for which they do not hold hukou registration. The floating population accounts for nearly one-quarter of all urban Chinese. Although often portrayed as rural-to-urban migrants, the floating population actually comes from both rural and urban origins: 54 % of migrants have an agricultural hukou but the other 46 % hold a non-agricultural registration. Of the migrants who arrived in the 5 years before the 2000 census, the previous place of residence for 39 % was another city or town, with 61 % arriving from a rural village. Although they are characterized as "floating," a term that suggests constant movement and only fleeting attachment to place, a significant share of these migrants have long-term residence in the city where they were enumerated: 40 % had lived there for 5 years or more. In a study of floating migrants in Fujian Province, Zhu (2007) finds that 19–26 % intend to stay despite their lack of legal status, although most intend either to return home or to move on when employment opportunities arise.

In Beijing, some 28 % of these migrants rent private housing, usually paying substantially higher rents than other urban residents but in turn receiving housing of at least adequate quality. The remainder of Beijing's floating migrants often live in housing linked to their work-places:

26 % live in work-unit dormitories, 13 % rented work-unit housing, and about 20 % lived at the work site itself. A number of studies have shown that all three types of work-related housing are of poor quality at least in terms of crowding and lack of privacy. Examining the floating population as a whole, however, Jiang (2006, p. 732) finds:

> In contrast to local residents, the floating population had better access to tap water, clean cooking fuel, better bath or shower facilities and more durable housing (in terms of housing construction materials), although their kitchen and toilet facilities were poorer. . . . Measured by the comprehensive housing facility index, the housing facilities were best for permanent migrants and poorest for the local residents, while the housing facilities of the floating population was in between. Moreover, the floating population living in households headed by permanent and local residents enjoyed better housing facilities than those living in households headed by the floating population.

In short, China's floating population of migrants comes from diverse backgrounds and lives in diverse circumstances. By all accounts, migrants who reside at their work sites (which are often construction sites) are greatly disadvantaged, but other groups of migrants enjoy advantages in some dimensions of housing and access to services while being disadvantaged in others.

How Migrant Girls Settle In

As the previous section has shown, much remains to be learned about the neighborhoods in which urban in-migrant girls are likely to be found. No doubt many do live in slums of one kind or another—child domestic workers may be an exception—but these slums can differ greatly in ways that affect the access of migrant girls to transport, employment, health, and other services (UN-Habitat 2003). Slums can also vary in terms of the communal energies they can bring to sustain women's groups and associations of the poor, which provide poor city dwellers with a collective identity and give them voice in the halls of local government. After all, adolescent girls are unlikely by themselves to be able to influence local government programs and services; they could only hope to do so if local women's groups, groups of the poor, and local NGOs begin to speak on their behalf. We will discuss these issues more fully in the chapter's next section.

Very little is known of the process by which individual in-migrant girls summon up the confidence to engage with their new communities, become recognized, and are then ushered into community life. Agarwal and Jones (2012) describe the unsettling experiences of new migrants in Indore,

> Recent migrant adolescent girls described their own hesitation in building relationships initially. They felt anxious about initiating conversation with others as they felt they did not belong and were concerned about how they were regarded by others. Equally, girls perceived a hesitation among neighbours to get to know them: "People think they don't know who we are, where we're from, and what we're doing so they're reluctant to get to know us" (Jyoti, age 14). This feeling gradually subsided for girls if they became involved in activities within the neighbourhood
>
> . . . The early period following migration could be a particularly difficult and lonely time.

For long-distance migrants, these difficulties were compounded by a lack of familiarity with the local language and culture:

> When I came here I did not even know Hindi. I spoke the village language. . . . I felt odd as I did not understand what they were saying. Gradually I started understanding . . . (It took) 5 to 6 months.

One girl who had migrated to Indore from a conservative village described feeling different from her urban peers who wore clothes such as jeans and T-shirts. Differences in dress contributed to the social distance she felt from her peers, and her hesitation in adjusting to urban culture reinforced this distance. Indian migrants who were in the city on a temporary basis for work found it all but impossible to connect:

> As a temporary migrant, Jyoti faced difficulties integrating into the slum community. [Her] family had no contacts in the city except their employer and another family from their village working in the same [brick] kiln. Although she was able to play with other temporary migrants working at the kiln, they were not welcomed into the wider slum

> community. . . . Despite being in a large city, Jyoti had not left the vicinity of the brick kiln.

Agarwal and Jones (2012) observed that similar barriers confronted other migrant girls. Sunita, one of their interviewees, had attended university, but even she

> . . . lacked the confidence to venture outside alone in these unfamiliar surroundings. As a result, she had seen little of the city beyond the alleyway in which she lived in the slum. . . . Sunita was pregnant [and unwell, but] had little awareness of the health facilities and services available in her neighbourhood and without many contacts in the city, she did not know how to obtain this information. As a result, she had not visited a health worker since being in the city.

In these accounts, it seems that girls who have the autonomy and social confidence to spend time outside their homes can eventually build a new personal network of city contacts and friends, but girls who feel restricted to home can remain intimidated and socially isolated. For Sunita and other migrants in this study, little could be perceived of the city of Indore beyond the immediate vicinity of home. They were effectively locked into small, circumscribed, and rather lonely worlds inside a vibrant and bustling metropolis.

Migrants whose family members are already in Indore are more fortunate than isolated migrants: they can call upon at least a small network of social resources to ease the process of adjustment. As Agarwal and Jones (2012) write,

> Migrants living in these slums typically had family connections in the area, which were instrumental in the decision to migrate and certainly in the choice of migration destination. . . . On arrival in the city, relatives provided considerable informational and practical support, such as arranging accommodation in their own or a rented home for the initial period. In this way, migrating to join family connections provided not only familiarity but also security for girls and their families.

For the migrant girls who had no option but to live with non-relatives and far from family, connections can nevertheless be maintained between the elder females of the migrant's city household and her parents in the village home (Temin et al. 2013).

With the advent of modern technologies, however, it is no longer obvious that to be accessible, personal and social resources must be nearby in a geographic sense. An emerging literature, mainly based on small qualitative and quantitative studies of China and countries in Southeast Asia, suggests that migrant girls in these regions are actively constructing their own geographically far-flung personal networks through the use of mobile phones and text messaging (Bunmak 2012; Lin and Tong 2008; Ngan and Ma 2008; Yang 2008). The phenomenon is especially marked among the migrant "factory girls" who work very long hours in tedious jobs, and who enjoy precious few opportunities to savor leisure time in the company of friends and family. For them, text messaging becomes a form of virtual social life that maintains connections with parents and family, and which sustains friendships and allows space for a bit of flirtation and experimentation with attractive identities (as through the adoption of "beautiful" on-line names and other communication tactics). As Lin and Tong (2008) note,

> Migrant workers, who have been accustomed to a relatively stable set of practices of early marriage in the villages, are now thrown into a fluid set of discourses about dating, love, romance, choices, and desires. . . . SMS seems to provide a space for emerging amorous feelings and romance . . . . In particular, women are encouraged to speak out their feelings and take more initiative in the textual world.

Many of these migrant girls arrive without much command over the written word, but assisted by the instructive examples given in the pocket-size SMS manuals that are ubiquitous in the region, texting gives them an informal and pleasurable way to play with words and thereby build literacy. It also provides a network that enables quick exchange of news about job openings, from which both migrant girls and boys benefit. These technology-enabled developments are interesting enough in themselves, but they also suggest an opening for program interventions that would connect to migrant girls through

texting, and which might supply information on community resources—for example, where to go in cases of threat or emergency—that might then propagate across migrant virtual networks. The literature is still too new to provide many specific examples of such programs, but in regions where mobile phones have achieved high levels of penetration, the possibilities bear watching.

Residential Mobility

The movements undertaken by adolescent girls certainly do not cease when they arrive in the city, but few studies of migrants continue to trace them as they circulate from house to house and neighborhood to neighborhood. Residential mobility is exceedingly difficult to summarize across settings, because a migrant's ability to change residence within a city depends on a myriad of factors: the neighborhood in which she first arrives, the possibilities for renting, whether the household has security of tenure, access to formal institutions offering credit-based housing finance, and the extent to which moves are effectively restricted by regulation and other government policies.

In a study of slum-dwellers in Accra (Ghana), Rokicki (2011) makes use of a retrospective migration history to identify women who moved during adolescence. Among these women, most of those who arrived in Accra as adolescent in-migrants found housing initially in the relatively poor neighborhoods of the city (in the lowest quartile of a socioeconomic index), and although nearly 60 % of the in-migrant women went on to move again, these follow-on moves tended to take them to (marginally) better housing located in other poor neighborhoods. Adolescents who were already living in Accra were also residentially mobile, but their subsequent moves were distributed across a wider variety of the city's neighborhoods. As Rokicki (2011) points out, all of the respondents in this study resided at interview in an Accra slum; it would not be surprising if setbacks and disappointments were over-represented in their life experiences.

So far as we are aware, apart from Rokicki (2011), no research has focused specifically on the residential mobility of urban in-migrant adolescents. For South Africa, Ginsburg et al. (2011) have used the Birth to Twenty cohort study to follow a representative sample of children born in 1990 in Greater Johannesburg, whose residential histories can now be reconstructed up to age 15. (By definition, all of these children are native-born urban residents.) By that age, 57 % of children had changed residence at least once within the metropolitan area. Changes of residence are more likely for the children whose mothers (or caretakers) have no formal education and for those living in poor-quality housing. In Johannesburg, residential mobility would appear to be an indicator of disadvantage. The Lall et al. (2005) study of Bhopal (India) also employed an innovative retrospective housing history questionnaire and a representative city-wide sample of households. Non-slum households tend to remain in non-slum neighborhoods, with only 7 % of these households moving to slum neighborhoods. However, about 1 in 5 of Bhopal's slum-dwelling households were able to negotiate a move out of the slums, a process that often took years while they pieced together enough personal savings to afford new housing. Lall et al. found that residents of better-off slums were able to move out more quickly, as were in-migrant households (in Bhopal, these households are better-educated and possibly more enterprising than urban natives). Renters were generally more likely to move than owners—as shown in Chandrasekhar and Montgomery (2009), in urban India renting becomes more common than owning as one moves up the socio-economic scale. The renting–owning difference is especially marked in the case of "owners" lacking any formal documentation of ownership (they form the majority of owners), who cannot exploit the asset value of their housing to trade up. Hence, in the Bhopal study but not in Johannesburg, residential mobility is associated with socioeconomic advantage.

Reviewing Chinese cities from 1949 to 1994, Huang and Deng (2006) find low levels of

residential mobility overall, with policies governing eligibility for housing (which in this era was allocated through work units) being the dominant influence over this period and individual characteristics not linked to qualification being less important. Since 1994, the pace of residential movement has substantially quickened and features of a private market in housing are emerging. Wu (2006) focuses specifically on the experiences of in-migrants to Beijing and Shanghai, drawing upon surveys of migrants. Well into the reform era, the hukou system prevented migrants registered in rural areas from accessing state-supplied rental housing. However, the situation is changing. Where migrants with rural hukou are ineligible to own, they are increasingly finding rental housing in migrant estates managed by local governments. These migrants move often, especially between the ages of 25 and 35, and would appear to be more mobile than urban natives. Although adolescent migrants are not singled out in Wu's study, multivariate models indicate that mobility declines significantly with age, suggesting that residential moves may be especially common among the young. As Wu (2006) emphasizes, knowledge of the specific housing opportunities for which a migrant is eligible circulates within migrant informal social networks (initially comprising friends, relatives, and co-villagers) and work-places (especially in the large firms and state enterprises providing dormitory housing).

Associations of the Urban Poor

Throughout this chapter, we have emphasized the social capital of urban migrants, mainly as embodied in their personal networks. But social capital in the form of local associations of the urban poor also needs attention. In the well-documented case of India, associations of slum-dwellers have provided the poor with effective "voice" in local bureaucratic and political circles (Appadurai 2001; Burra et al. 2003; de Wit 2002; Garau et al. 2005; D'Cruz and Satterthwaite 2005; Karanja 2010; Pervaiz et al. 2008). These groups have emerged over the past 25 years, beginning in Asia, and then spreading to sub-Saharan Africa and to an extent also to Latin America.[11] It is only recently that adolescent programming has begun to take advantage of these developments, and only recently that urban poor associations—which employ community mobilization as a means of securing adequate housing, sanitation, and water supply—have recognized migrants and adolescents as significant community sub-groups warranting attention. In their activities to date, the large slum-dweller associations have not taken the specific concerns of adolescent migrant girls into account, being more focused on securing housing and adequate drinking water and sanitation—but there is no reason to think that greater breadth cannot be achieved.

In Indore, Agarwal and Jones (2012) note the difficulties that migrants face in learning about and taking part in such local associations:

> In regards to women and children's groups, although many girls were aware of the concept, they were unaware of the groups available within their own neighbourhoods. They also feared what would be expected of them or where they would have to go if they agreed to participate. Moreover, women's group members themselves expressed that people in the community tend not to invite recent migrants to social activities and groups until they are acquainted and unless they are certain that the migrants intend to stay on a more permanent basis. Yet, many adolescent girls have little opportunity initially to become acquainted with others.

These barriers are especially formidable for temporary migrants. In Indore as in many Indian cities, an Anganwadi center is an important source of nutritional supplementation and basic

[11] Slum-dweller associations from a number of countries are now linked to each other via Slum/Shack Dwellers International (SDI). In 1996 when it began, the members of SDI included South Africa, India, Zimbabwe, Namibia, Cambodia, Nepal and Thailand, and the network has expanded since then to include Kenya, Malawi, Uganda, Ghana, Zambia, Sri Lanka, the Philippines, and Brazil. Recently, an International Urban Poor Fund, which is being managed jointly by the International Institute for Environment and Development (IIED) and SDI, has been organized as a vehicle to make small grants available to SDI member groups to support community-driven initiatives (IIED 2007; Mitlin 2008).

health care for community members, including adolescent girls. But center staff are often reluctant to enroll temporary migrants, whom they suspect will soon leave and create havoc in record-keeping, thus exposing staff to criticism from higher-ups. Agarwal and Jones (2012) conclude that frontline workers and NGO staff may need to be sensitized to the situations of migrant girls, and be sufficiently flexible to allow even temporary migrants to participate in programs as appropriate.

Clearly, creative programming efforts will be needed if migrant girls are to be welcomed and fully incorporated in urban community groups, which are present in many cities and in principle could assist new migrants to settle in. Indeed, in recent work in the slums of Indore and Agra, the Urban Health Resource Centre—a local NGO—has worked with women's groups to recognize the full range of vulnerabilities existing in their communities, including those that are experienced by migrant adolescent girls. In the Indian context, it is easier for women's groups to approach older, married migrant girls than the younger, unmarried migrants. For example, women's groups can lead a pregnant (married) adolescent migrant to the ante-natal services available in the community about which she might not otherwise be aware. In event of need, one of the trained, confident women of the groups could accompany the pregnant girl to the hospital for delivery. Associations of the urban poor in India are increasingly focusing on the social implications of having identification documentation. Obtaining a picture ID and proof of address has unique significance for the residents of slum settlements, even more so for migrant adolescent girls and their families. The UHRC has been able to assist community groups in learning about different forms of picture IDs and proof-of-address options, which are of value to migrant and non-migrant residents alike.

Women's groups and associations of the urban poor would therefore seem to have much to contribute to easing a migrant's integration into the community. Married adolescent girls could be encouraged to become members of women's groups, and full group membership for the mothers of girls from migrant families could work to the benefit of these younger migrants, perhaps raising the overall profile of migrants in the group's concerns. Women's groups should be sufficiently flexible to allow for girls' circumstances: for example, a girl whose length of residence is uncertain could delay joining the savings and loans activities until she feels more rooted in the community, but meanwhile could take part in other group activities.

Conclusions and Recommendations

This chapter shows that although the percentage of migrants among urban adolescent girls varies a great deal across countries, there are many countries in which significant percentages of urban girls have recently arrived. In setting adolescent intervention priorities, policy-makers and program designers will need to attend to the ways in which measures of migration affect estimates of these percentages and thus the size of the migrant group as a whole. Estimates drawn from surveys in the DHS program suggest sharply higher percentages than do estimates based on population censuses. Which of these sources is taken as the better guide for research and policy will depend on local understandings of migration, in particular the distinctions between the relatively shorter-distance moves that are captured in the surveys and the generally longer-distance moves identified in censuses. The distinction between rural-origin and urban-origin migrants also needs careful consideration. There are many countries in which rural-origin migrants remain in the majority, especially where levels of urbanization are still low, but in most of the cases we have examined there are more urban-origin migrants. As countries continue to urbanize, this segment of the migrant population will need to be given closer attention.

As has been demonstrated, in terms of schooling and social isolation, urban migrant girls as a group suffer from disadvantages in relation to their non-migrant urban peers. But in terms of material disadvantage, insofar as that can be

equated with access to basic-need services (drinking water and sanitation), there is no clear evidence that migrant girls as a group fare worse than non-migrants. Even when migrant girls are separated into two sub-groups—those coming directly from rural villages and those migrating from other towns and cities—little compelling evidence of disadvantage emerges. Hence, we see little in the empirical materials at hand to suggest that migrant girls are disproportionately found in slums. The literature on adult urban migrants, which was reviewed in Panel on Urban Population Dynamics (2003), indicates that the strongest evidence of migration-related disadvantage is confined to an adjustment period after arrival, which may last two to three years. After that period of adjustment, however, studies tend to show that migrants are either indistinguishable from non-migrants in terms of living standards, or even appear to do better than the non-migrants.

Research Recommendations

Ask About Migration As poor countries continue to urbanize, it will be essential to keep urban migrants in view. As mentioned at the outset, the Demographic and Health Surveys has recently abandoned its 20-year tradition of collecting migration data, and the Multiple Indicator Cluster Surveys (MICS), now entering its fourth round, has yet to begin collecting such data. Both of these important survey programs recognize the significance of the adolescent lifestage for individual well-being and policy; but neither seems to recognize the extent to which girls and boys of this age are on the move. We would not recommend that the DHS simply reinstate its former questions, which were never adequate. Rather, we would urge that the DHS and MICS programs coordinate their efforts to define migration (possibly following the lead of national censuses in using administrative boundaries as the core criterion) and agree upon a modest block of questions that identify a migrant's origin areas in terms of urban–rural status and detailed, named geographic location. We would argue against efforts to artificially "standardize" these geographic locations—that classification task should be left to the researchers using the data, who will be able to call upon other public-domain sources of geographic boundaries.

Seasonal and Short-Term Migration Migration researchers have long lamented the lack of information on these moves, which are important to the lives and well-being of many residents of poor countries. Where possible given other survey priorities, we recommend that the DHS and MICS programs initiate a period of experimentation with survey questions designed to illuminate such moves.

Residential Mobility Very little research effort has been directed to characterizing a migrant's first living situation upon arrival and tracing the series of moves subsequently undertaken within the city. Yet arguably, a change of house and neighborhood can be just as important to a girl's well-being as a longer-distance move. The dividing-line between migration and residential mobility is artificial at best and misleading at worst.

Tracking Researchers designing longitudinal surveys to understand how moving is linked to changes in well-being are urged to consult Beegle et al. (2011) and Thomas and Frankenberg (2001) for guidance on how large-scale national surveys can track migrants to their destination areas. Beegle et al. (2011) are able to show that had their survey been limited in coverage to households that remained in Kagera (Tanzania) over the 1994–2001 period of the study, it would have missed the substantial gains in living standards that out-migrants achieved, and would have suggested only modest declines in poverty when (with all residents followed) much greater progress in reducing poverty was actually achieved. As mobile phone coverage increases, we expect it to become much easier for researchers and

intervention programs alike to maintain contact with adolescent girls on the move.

Explore the Implications of Neighborhood for Program Interventions Having several times stressed the point that not all migrant girls move to slums, we end the chapter with some reflections on the possible benefits and costs of a slum focus in urban adolescent programming. Because many slum communities possess active and dynamic urban poor associations to which in-migrant girls could be linked, this place-focused strategy has much about it to recommend. There has been limited awareness to date among urban poor associations of the specific concerns of migrant girls. We recommend a program of research to explore the diverse ways in which urban poor associations can lend support to migrant adolescent girls to smooth the process of adjustment.

But the issues in situating adolescent programs are more complex. In principle, mixed-income neighborhoods might be better able than slums to supply volunteers for community-based organizing activities, and they might also possess a stronger base of other types of local associations, both of which could work to the benefit of the migrant adolescent girls living in these communities. It is likely that significant percentages of migrants working as domestics live in such neighborhoods. Yet there are also risks in situating interventions in mixed-income communities. Program benefits can be siphoned off by upper-income residents, and it could prove difficult to sustain community motivation. Even if they lack all manner of other resources, poor slum communities have demonstrated the capacity to activate the bonding social capital that lines up residents in support of the programs that benefit them, and when assisted by NGOS in an intermediary role, they have proven capable of sustaining the bridging social capital that brings new resources into the community. Recognizing that a slum focus will inevitably miss many migrant girls, there are nevertheless many sound arguments for situating initial program interventions there.

Appendix

Broadly similar approaches are taken in censuses and DHS surveys to collect data on migration, but the approaches differ in several respects and neither data-gathering mechanism is fully satisfactory. To appreciate the differences in the two approaches, it may be helpful to set them against a third alternative that would collect minimally adequate migration information. Such a mechanism would summarize moves in terms of their origin and destination, with the urban or rural nature of both locations recorded and situated geographically either by point coordinates or (more realistically) in terms of small administrative units. In this way, the data would be aligned with migration theory, which emphasizes the role of spatial differences in current living standards and longer-term life prospects across a range of potential destinations (Lucas 1997). Unfortunately, neither the IPUMS censuses nor the DHS surveys meet these minimal criteria, and they fall short in different ways.

One relatively minor difference between the census and survey approaches has do with the description of a household's place of residence at the time of the interview. The vast majority of censuses—although surprisingly, not all—indicate whether the current residence is urban or rural according to the country's official definition.[12] The official definition is also applied by the DHS to classify the sampling clusters of its surveys. Where the census and DHS programs differ is in supplying geographic context on the administrative units in which the interviewed households reside. This is less a matter of what data are collected than of restrictions on their release into the public domain. To protect respondent confidentiality, the census files made available through IPUMS generally identify locations only by broad administrative region, such as the province of residence or a similar first-level administrative unit. The equivalent of first-level

[12] For example, China includes no urban designation in its IPUMS 1990 census sample. The Chinese census identifies large cities and it is possible to estimate migration to those cities, but not to urban areas in general.

administrative area is also available in most DHS surveys, but quite a number of these surveys additionally supply finer geographic detail in supplemental country-specific variables. In recent years, an increasing percentage of DHS surveys have gone even further in the direction of spatial specificity by collecting longitude–latitude coordinates for their sampling clusters, making these available in the public-domain datasets.[13]

If the DHS program offers greater specificity about current residence, its surveys are generally less revealing than censuses about migration. Most censuses collect information on place of residence 5 years before the date of the census, although a few focus instead on 1 or (in rare cases) 10 years before the census. Migrants are then defined as those whose current residence differs from residence 5 years previous. In focusing on these two points in time, this (conventional) definition overlooks important movements that take place between them: seasonal migrants would not be identified, nor would most short-term "target migrants" who have returned by the time of the census to where they had previously lived (Bilsborrow 1984; Hertrich and Lesclingand 2012). A number of censuses include a question on the length of current residence (coded in years) as an alternative to the 5-years-previous question; and some censuses gather both. When both measures are available, we use the more conventional 5-years-previous measure; if it is not available, we define migration as taking place when the length of current residence is less than 5 years. If more than one move took place over the 5-year period, neither of these measures will record it: they indicate whether any move took place, but not the number of moves.

In the Demographic and Health Surveys, only the length of current residence is generally available (it is also coded in years), and relatively few surveys have provided more detail than that. For a time, in the late 1990s to early 2000s, the DHS program experimented with using monthly calendars as a device to record demographic behavior over the 6 years leading up to the survey, and about 25 countries included migration in these calendars. An examination of the calendars shows that length of current residence as calculated via the calendar is broadly consistent with the standard question on years of residence. Also, relatively few adolescents or adult women are found to have moved more than once over the 6-year span of the calendar (under 10 % in these surveys), suggesting that not much information on the number of recent moves is sacrificed by using length of residence to indicate whether any move took place.

An important difference between the IPUMS-processed censuses and the surveys—one to which we give considerable attention in this chapter—concerns the distance or boundary-crossing criterion that distinguishes a migratory move from a mere change of residence. For current urban residents, the DHS practice has been to define migration as a move that originated outside the city or town in which the respondent currently lives. Since the boundaries of these urban places are difficult to discern, and since neither interviewers nor respondents can be expected to know them precisely, it seems that the DHS interviewers must in some way bring judgement to bear in separating out migration from all accounts of moves given by respondents. It is not at all obvious what criteria are applied in these surveys to define rural migration—is migration entailed in a change of village?—and possibly in rural areas locational boundaries would be even less evident than in urban areas. Census data-collection efforts typically define migration with greater consistency and transparency, making specific reference to the boundaries of official administrative regions.[14] Some censuses define migration to be a move that crosses a major administrative unit boundary; others

[13] Mindful of the potential threats to confidentiality, the DHS introduces random locational errors to these coordinates before releasing them, with the result that locations are pinpointed with a maximum of 2 km of displacement error in the case of urban clusters and 5 km for rural. Although displacement errors of this sort are damaging for studies that depend on access to the fine spatial detail, we do not think they present a serious threat to studies of migration.

[14] How this is handled in the field is admittedly unclear.

allow crossings of minor unit boundaries to count. As Standing (1984, p. 32) wrote nearly thirty years ago in a passage that is still on point today,

> Somewhat remarkably, most demographers and other social scientists have let statisticians and survey administrators determine the areas between which moves are classified as "migration".. . . It has been said that the areas between which moves count as migration are first defined by bureaucrats and later rationalised by social science researchers.

Standing and others have noted that because these administrative units vary a good deal in their geographic size, both within and across countries, it is difficult to work out an acceptable method for standardizing estimates so that they are not size-dependent.

Censuses and the DHS program have taken fundamentally different approaches to characterizing the area from which a move took place. Ideally, as we've mentioned, a migrant's origin area would be described not only in geographic but also in urban–rural terms. In reality, neither censuses nor the DHS provides such minimally complete information, at least in general. Censuses do not commonly record whether the community from which the migrant came was urban or rural. The DHS surveys, by contrast, typically do describe the rural–urban status of the origin community, but offer no clues as to its geographic location. Moreover, the basis on which the urban–rural status of the origin is decided is not obvious. It would again appear that the classification is left to the DHS interviewer to decide.

The geographic distance covered by the migrant is not available in either DHS surveys or censuses, and in neither case is the origin described in sufficient detail for distance to be computed very precisely after the fact. Given data on the boundaries of the administrative units recorded in the census (stored in a shapefile or the equivalent), the minimum and maximum possible distances travelled in a move could be calculated, and if additional data were available on the spatial distribution of population within these administrative units, the distance traversed by a migrant could be estimated in a statistical model. This would be a substantial although feasible empirical exercise, but it lies outside the scope of this chapter.

The respondents canvassed by censuses and DHS surveys also differ in ways that could significantly affect migration estimates. Census interviewers collect information from each household member, or at least from those old enough to be eligible for consideration. (Age five is the usual cut-off below which migration questions do not apply.) This information is conveyed to the census-taker by one household member who speaks for the household as a whole. In the DHS survey program, by contrast, migration-related data are collected only from the subset of adults who are selected (at random) for in-depth individual interviews, rather than from all migration-eligible household members, and the interviewees speak for themselves. In most DHS surveys, the respondents are women aged 15–49, although it is becoming more common for men to be interviewed as well, allowing a more representative picture of migration to emerge. An important consideration is that in a number of Asian and North African countries, DHS individual interviews are restricted to ever-married women, a design decision that introduces the potential for selection bias in migration estimates. (We will provide examples below.) The by-proxy census reports of migration may well contain more measurement error overall than if individual members gave their own accounts to the census-taker, but the census data should not be afflicted by marriage-related selectivity bias.

Marriage-Related Selectivity Bias

A number of DHS surveys interview only women who have been married, and because it is through the individual interviews that migration status is ascertained, this practice raises the possibility of selection bias that could distort estimates of migration. Migration questions in censuses are framed without reference to marital status, and

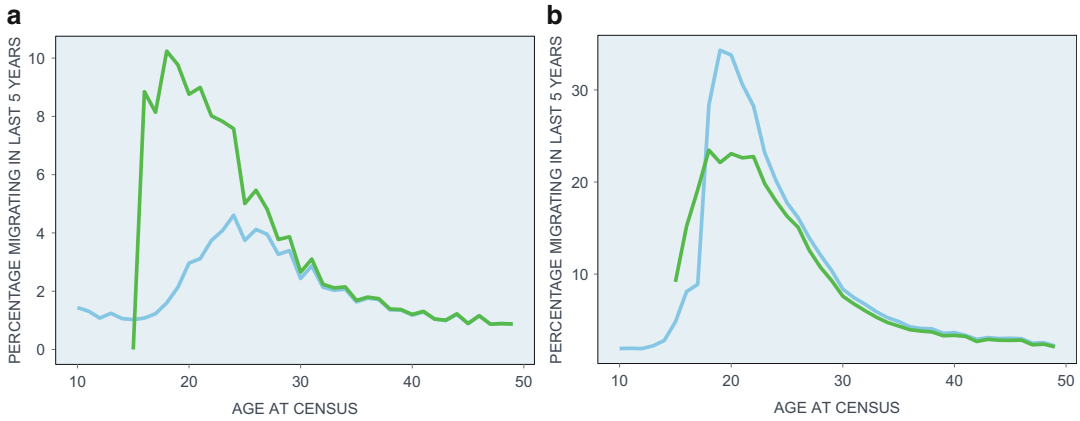

Fig. 26.18 Urban in-migration percentages for all women and for ever-married women, Egypt (2006) and Vietnam (2009). All-women percentages are depicted in blue lines (beginning age 10) and percentages for ever-married women in green lines (beginning age 15). Migration defined as a cross-governorate move for Egypt and a cross-province move for Vietnam (Source: IPUMS). (**a**) Egypt, 2006 census. (**b**) Vietnam, 2009 census

unlike DHS surveys, these questions cover all household members who are old enough to be asked. Figure 26.18, based on census samples for Egypt and Vietnam, illustrates how marriage selection effects can introduce bias. These calculations compare estimates of urban in-migration for all women who were canvassed in the censuses with estimates from the census records of ever-married women. At older ages, by which nearly all women in these countries have married, the migration percentages coincide. At younger ages, however, they differ substantially—but the direction of bias is upward in the case of Egypt and downward for Vietnam. Although census data do not establish the time-sequence of events, it would appear that in Egypt, women tend to migrate just before, upon, or shortly after marriage, so that the migration percentages for ever-married women are well above those for all women. In Vietnam as in much of Southeast Asia, migration is typically undertaken by young unmarried women who move for a variety of reasons—among them, to enjoy a period of relative autonomy away from parents, and to earn incomes that help support younger siblings—and thus an artificial restriction of the sample to ever-married women would depress urban migration percentages.

These census-based examples suggest that migration estimates from surveys restricted to ever-married women will tend not to give an accurate representation of migration overall, especially in the age ranges in which substantial percentages of women are yet to marry. Since the direction of bias as well as its magnitude is situation-dependent, we have opted to exclude from our analyses all DHS surveys limited to ever-married women. This is an unfortunate—Egypt, India, and a number of other large countries have DHS surveys restricted to ever-married women, and some of these countries have been surveyed multiple times—but we see no way to correct statistically for the selection bias.

Moving for . . . What?

Censuses and many surveys (although not those in the DHS program) often ask migrants to describe why they moved. The usual practice is to permit only one "most important reason" to be recorded, which is unduly restrictive given that migration is often motivated by many considerations. If they are limited to one response only, girls and young women may supply the reason that others would be likely to find most socially acceptable. A girl who migrates to join her spouse, but who also holds ambitions to pursue university schooling and gain

professional employment, may simply describe her move as being "for marriage" so that her high ambitions remain appropriately cloaked.

As guides to motivation, questions such as these also suffer from a fundamental and irremediable logical flaw: They are asked only of movers. If the desire to be with a spouse is an important consideration in a girl's choice of location, then a girl who stays home to be with her spouse is never given the opportunity to say that she "stayed for marriage." It is obvious—and yet the literature seldom remarks upon this obvious point—that questions put only to movers cannot detect which motivations truly guide decisions about location.

If these questions have little value for understanding the considerations that lead some girls to move and others to stay, they have other uses. If a girl says that she moved to the city "for employment", but has no job at the time of interview, this might be read as a mismatch between her pre-migration expectations and the realities she has faced after the move took place. There is value and the potential for securing insight in this kind of comparison.

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Forced Migration

27

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Defining Forced Migration: Categories and Boundaries

The broad phenomenon known as migration is often delineated into two main categories – *voluntary* migration (usually economically motivated), and *forced* migration or displacement, defined as coerced or involuntary movement from one's home. These categories are not divided by bright boundaries, but rather by blurry ones. The overlap between forced and voluntary migratory movements, and the consequences of this ambiguity for analysis and policy, has been highlighted by scholars in recent years (see, for example, Koser and Martin 2011). The United Nations High Commissioner for Refugees (UNHCR) was originally founded to assist refugees displaced by war or persecution, who constitute the "conventional" type of forced migrants,[1] yet in recent decades the concept of forced migration has expanded to encompass a broader range of coerced movements. The International Organization for Migration (IOM) (2012) defines forced migration broadly, as "migratory movement in which an element of coercion exists, including threats to life and livelihood, whether arising from natural or man-made causes (e.g., movements of refugees and internally displaced persons as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects)." The International Association for the Study of Forced Migration (IASFM) (2012) describes forced migration as "a general term that refers to movements of refugees and internally displaced people (those displaced by conflicts) as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine and development projects."

Thus, there are at least four different types of forced migration (and sometimes population movements and individuals are a combination of two or more of these types) (FMO 2012):

[1] The 1951 UNHCR Convention relating to the Status of Refugees (hereinafter referred to as "1951 UNHCR Convention") defines a refugee as "someone who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it."

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M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2_27

- *Conflict-inducted displacement* – This is perhaps the most typical type of migration within the broader category of forced migration; it includes displacement by war, civil unrest, or other political or social processes leading to violence or persecution, including threats for reasons of race, religion, nationality or membership of a particular social group or political opinion (UNHCR 2008). It consists of both refugees who have crossed international borders (and therefore are covered by the 1951 UNHCR Convention), as well as internally displaced persons (IDPs, or those who have been displaced within the borders of their own countries), covered by the 1998 UN Guiding Principles on Internal Displacement (Hathaway 2007; Kälin 2011). Since the end of the Cold War, there has been a global increase in the number of armed conflicts and wars, and a corresponding upsurge in the number of individuals displaced. At the beginning of 2015 there were roughly 13.7 million refugees according to the UNHCR, plus nearly five million additional Palestinian refugees, who fall under the aegis of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), a different United Nations (UN) agency, and an additional 41.3 million IDPs, asylees, and persons of concern to UNHCR worldwide (UNHCR 2015). These counts represent a conservative estimate relative to the number of people displaced by conflict, since the definition used to determine refugee status for purposes of recognition under the 1951 UNHCR Convention is relatively narrow. The UNHCR proposes three durable solutions for refugees: repatriation to the home country, integration into the host country, or resettlement to a third country.
- *Environmental- or disaster-induced displacement* – This is the process of displacement as a result of environmental disruption, including both natural and man-made disasters, or larger environmental forces such as global climate change. Although it is difficult to estimate the number of environmentally-displaced persons, the most often-cited estimates are roughly 25 million in 2000, 50 million in 2010, and a projected 200 million or more by 2050, largely as a result of the progression of global climate change (Myers 2002, 2005; Brown 2008).
- *Development-induced displacement* – This is a type of migration which occurs when individuals are displaced by economic development projects such as dams, mining, or other such large-scale initiatives undertaken by government or private industry. Cernea (2000) estimates that, based on a study of projects involving involuntary resettlement that were funded by the World Bank, this category of displacement is the most numerous form, accounting for an estimated ten million displaced persons globally per year.
- *Human trafficking* – This term refers to the migration of individuals who are coerced to leave their homes for purposes of exploitation, such as forced labor or sex trafficking or tricked under a false pretense. There are few robust approximations of the total population of individuals affected by human trafficking. Laczko (2005) cites a rough estimate of 800,000-900,000 people trafficked annually worldwide, yet cautions against putting much credibility in global estimates, but argues for more local, specific analyses of trafficked populations.

There is also the category of stateless persons, who are persons who have lost their citizenship or rights as citizens, often without being geographically displaced. We will discuss statelessness further later in the chapter. Clearly, the current definition of forced migration is quite broad, including a wide range of circumstances and patterns of migration. There has been an energetic debate, particularly in the well-established refugee studies literature, on whether or not to embrace forced migration studies as an umbrella concept encompassing refugee studies along with various other categories of displacement (see, for example, Van Hear 2011a;

Hathaway 2007; Chimni 2009). Conceptually, we agree with the idea of the broader framework of forced migration studies (rather than the narrow refugee studies concept). Yet, the category of forced migration might be thought of as an umbrella concept, rather than serving as a robust theoretical framework to advance our understanding of migration. It is really a term that links several different types of migrants and migration processes into a broader category of social scientific and policy concern. Moreover, as pointed out by Koser and Martin (2011), among others, human mobility is often a combination of voluntary and forced, and we recognize the complexity of both creating and using distinctive categories. Environmentally-induced displacement is also discussed in another chapter in this volume (see Chap. 21 by Hunter and Nawrotzki). Development-induced displacement and trafficking are covered thoroughly in other publications (Cernea 2000; Laczko 2005). Therefore, in this chapter, we will concentrate on conflict-induced displacement, or refugees and IDPs.

A focus on forced migration has important implications for social scientific scholarship on migration, but it is impossible to ignore the fact that, in addition to comprising processes of theoretical interest to those attempting to understand migration flows, these categories are also matters of serious policy and humanitarian concern. Indeed, the forced migration literature—and particularly the refugee studies literature—is actively engaged with questions about how to effectively negotiate between social scientific inquiry and policy relevance. While some scholars see identifying and pursuing a social scientific orientation toward scholarship on forced migration as desirable (Turton 2003; Jacobsen and Landau 2003; Bakewell 2008), most of the literature either takes for granted or actively adopts policy-relevant frameworks and categories. The former group rightly asserts the critical importance of clarifying the distinction between "categories of social and political practice and categories of political and social analysis" (Brubaker and Cooper 2000, 4), an important corrective and challenge in forced migration studies as in many other areas of social science. These considerations are balanced by Van Hear (2011b), who proposes an engaged, active, and deliberate interchange between social scientific research, policy, and popular concepts and frameworks.

Likewise, it is worth noting that while the numbers of forced migrants are high in human terms, forced migrants per se – following the definitions above – comprise a small proportion of the over 232 million migrants estimated to be living outside of their home countries in 2013 and the additional hundreds of millions of internal migrants worldwide (IOM 2013). The vast majority of internal and international migrants are broadly considered to fall into the category of voluntary migrants, typically moving in search of economic opportunities, for family reunification, and/or for education (Castles 2003). Forms of (largely) economic migration (which are often framed as voluntary) have dominated social scientific research on migration, while scholarly research on forced migration has largely occurred within the "refugee studies" field, or within disciplinary silos, for example, anthropology and political science—disconnected from other relevant social scientific disciplines such as sociology, demography, and/or economics (Reed 2006). Moreover, much of the research on forced migration is produced by and for policy actors, and, as such, it is much more applied and less concerned with generating or testing social scientific theories, compared to other academic disciplines (for a discussion, see: Jacobsen and Landau 2003; Landau and Jacobsen 2005; Rodgers 2004). Thus it is important for scholars to articulate the ways in which studies of forced migration contribute to social scientific understandings of migration, and the ways in which forced migration studies, both social scientific and policy-oriented, can benefit from incorporating theories, methods, and substantive knowledge from the broader social scientific study of migration. A recent volume on the migration-displacement nexus,[2] which presents

[2] This concept describes the complex and dynamic interactions between voluntary and forced migration, and as such indicates that the lines between voluntary and forced migrants are often blurry.

research on the various types of migration, both forced and voluntary and the links between them (Koser and Martin 2011) is a step in the right direction.

Undoubtedly, as with much migration research, part of the ongoing disconnect between research on forced migration and research on broader migration processes reflects both a presumed disconnect between the groups being studied and the poor quality of the existing data on such migrants. People on the move are always difficult to count and to track and thus it is commonly only when they stop and settle (at least semi-permanently) in a camp[3] that they are captured by data systems. However, even then, as Crisp (1999) and Agier (2011) point out, different agencies may obtain diverging counts of refugees.[4] Forced migrants, living in the midst of conflict and persecution, are even more difficult to track than other migrants. And extant data systems are not generally set up to deal with the complexities of the migration process and its effects, or to adequately account for the reasons underlying the mobility. Finally, issues of access and funding mean that there are more data and research projects on refugees who have been permanently resettled in third countries rather than those who are in camps, in flight, self-settled or urban situations in host countries. Thus, although we have estimates, and sometimes fairly accurate estimates, of economic migrants, our estimates of forced migrants, or of more "blurry" categories of migrants, are often quite poor.

With these considerations and conceptual frameworks in mind, this chapter will proceed to consider recent social scientific studies on selected topics in the forced migration research literature. In one chapter, it is not possible to cover every topic of interest, but we attempt to take a broad view of the field. The topics explored in this chapter include:

- The interdisciplinary research field of forced migration studies;
- Empirical knowledge of forced migrant populations;
- Changing policy and practice in humanitarian response;
- Displacement outcomes;
- Methodological and ethical issues in forced migration research; and
- Current and future key areas for research.

The Field of Forced Migration Studies

Prior to the 1930s, scholars made little distinction between forced and voluntary migrants. However, in the late 1930s there were several publications (see, for example, Brown 1939; Holborn 1939)—focusing on refugee children, professional refugees, and refugee resettlement—with both policy and practical concerns. Beginning with the passage of the 1951 UNHCR Convention which provided a first legal definition of "refugee," the topic of forced migration has been continually gaining interest within academia. An emphasis on policy-relevant research has continued to be at the heart of refugee studies, which has been somewhat controversial.

In the early 1980s, the first academic research centers focusing on refugees were established. The Refugee Documentation Project (now the Centre for Refugee Studies) at York University in Canada was started in response to "Operation Lifeline" during the Southeast Asian Boat People crisis. A few years later, Barbara Harrell-Bond founded the leading center on forced migration research at the University of Oxford, England: the Refugee Studies Program (now the Refugee Studies Centre). This center is also home to several leading publications, such as the *Journal of Refugee Studies* and *Forced Migration Review*, which reflect the policy and practically-oriented character of forced migration research. The founding of these refugee studies centers coincided with a rapid increase in the numbers of refugees from the global South who have migrated to the global North (Chimni 2009).

[3] Self-settled forced migrants, urban refugees and IDPs are less frequently counted.

[4] Agier (2011, 109) gives the example of camp Lainé in Guinea in 2003, where at the same time Médecins Sans Frontières counted 21,000 predominantly Liberian refugees and the UNHCR 28,000.

From its inception, the field of forced migration was mostly thought of as focusing on "refugees" according to the definition of the 1951 UNHCR Convention. Gradually, the field of refugee studies has become more inclusive of other types of forced migrants, such as IDPs, development-induced displaced persons, trafficked and smuggled persons, and stateless persons (Betts 2011). This broader attitude may partially be attributed to the work of scholars like Zolberg et al. (1989) and Black (2001) who point out that scholarship on refugees should not be limited to those with the legal status. Legal scholar and diplomat Francis M. Deng, and some anthropologists have advocated for the inclusion of IDPs in the field of refugee studies, since refugees and IDPs share the same experiences—with the exception of crossing an international border. Consequently, Deng's and his colleagues' work contributed decisively to the creation and adoption of the UN Guidelines on IDPs (Ferris et al. 2012). While acknowledging the contributions of his colleagues, Chimni (2009) is more critical about the establishment of "forced migration studies," which he connects to politically-motivated interests of states in the global North. He argues that the field of refugee studies has always corresponded to the concerns of nations in the global North and their endeavor "to establish a *post-colonial imperial order*"[5] (2009, 13, emphasis his). In other words, humanitarianism, with an emphasis in keeping the "problem" (i.e., the refugees) in the global South, is a replacement for the former colonial relationship that allows the global North to maintain its hegemonic, yet benevolent position. Chimni (2009, 17) further maintains that forced migration studies, which now includes, in addition to refugees, IDPs, trafficked individuals, and "the construction of a post-conflict state", among others, is designed to deal with the geopolitical concerns of the global North, *not* the reality of day-to-day life and concerns for residents of the global South. He also criticizes this expansion of refugee studies because he cautions that it will reduce the focus on refugees *per se*; a view that is shared by Zetter (2007) and others.

Just as the issue of refugee studies versus forced migration studies is an ongoing argument within the field, so is the relationship between research and policy. On one hand, some scholars, like David Turton (1996, 96), have argued that "researching others' [refugees'] suffering can only be justified if alleviating that suffering is an explicit objective." Following this call, refugee studies scholars have helped to debunk the view of refugees as benefit-dependent victims, to draw attention to the special needs of refugee women and children, and to show the difficulties refugees face in host and resettlement countries (see, for example, Agier 2011; Chimni 2009; Lubkemann 2008). However, this close connection with policy has not been without problems. Lubkemann (2008) and Black (2001, 63) argue that this policy focus can both compromise academic independence and intellectual rigor, given "the uncritical use of a policy-based definition of refugees within academic writing." This may particularly be the case if research is funded by outside sources and/or when scholars and practitioners are collaborating (Nassari 2009). If the policy emphasis is too strong, scholars may not question labels (Lubkemann 2008) and privilege the view of the policy makers (Bakewell 2008). This focus on what Bakewell (2008, 436) refers to as "policy categories" can lead to the exclusion of particular groups of forced migrants (see the discussion in the last subsection of this chapter).

A major strength of forced migration studies is its interdisciplinary character. But it has not always been so. Initially scholars in disciplines like anthropology and geography, and, to some extent, legal studies, were those primarily conducting research on forced migration. Over the years, researchers from different academic fields have begun to contribute to the field. For example, in the natural and health sciences,

[5] Chimni (2009, 13) contends that it is connected to a changing concept of humanitarianism, in particular political humanitarianism which allows for "intrusive and muscular humanitarianism on the one hand and communitarian rationales for the validation of bound borders on the other hand."

important work in the areas of nutrition, mental health, and physical health has been conducted. Still, social sciences such as anthropology, political science, sociology, demography, and legal studies continue to dominate the field of forced migration studies. Despite its multi- and interdisciplinary character, most publications about refugees and other forced migrants appear in disciplinary and policy studies journals rather than refugee-specific journals (Black 2001) and hence may be more difficult to access. These publications also "identify (through) which lens" (Fiddian-Qasmiyeh 2011) a particular aspect of forced migration is observed. For example, an anthropologist studying forced migrants may document how forced migration has changed family structure, whereas a legal scholar may prioritize the legal aspect of a refugee situation. While this helps to integrate the topic of forced migration into various disciplines and may be useful for academic researchers of forced migration who are seeking tenure, it does not help to consolidate forced migration as a field of study.

Finally, one of the most critical questions in social scientific studies of forced migration in recent years is how to theorize the dynamics of structure and agency in migration processes. Here we refer to the sociological conceptualization in which *agency* is the ability of individuals to act independently and exercise their own free will and *structure* is the context (e.g., the economy, class divisions) which influence and may limit the opportunities and choices available to individuals. If we accept the broad definitions of forced migration outlined earlier, the only type of migration which would not fall into the category of "forced migration" would be that which is entirely voluntary or completely driven by individual agency; in other words, where no element of coercion exists (Hugo 2006, quoting Speare 1974). However, research has demonstrated that migrants, even in circumstances where they face violence or persecution, are motivated by multiple factors including considerations more typically considered to be "voluntary," such as evaluating the economic and social opportunities associated with moving against the dangers or limitations of staying in their home country or region. In situations where migrants have little choice about whether to leave, as when they are faced with imminent harm or when their homes are destroyed, they may face some options of where to go and whether or when to return. In the past two decades, forced migration researchers—and, to some extent policy actors—have begun to recognize that the causes and processes of forced and voluntary migration are much more interconnected than previously acknowledged (Wood 1994; Koser and Martin 2011). This has also been questioned by some economists as well as structuralist Marxist theorists, who challenge the conception of voluntarism or agency in workers' migration responses to global capital flows (de Haas 2012).

Thus, a strict dichotomy between voluntary and forced migration is unrealistic, a challenge which has been identified by a number of scholars, in particular sociologists and demographers, as well as by staff at institutions and agencies working with and concerned about displaced people. The approaches that recognized the linkage between voluntary and involuntary migration enable more sophisticated analysis and understandings of migrant populations of humanitarian interest, such as refugees and asylum seekers, the turn toward "mixed migration" models requires a delicate balancing act for institutional and political actors (Van Hear 2011b). Understanding the complexity of displaced migrants' agency in the context of coercion and violence is central to developing a robust conceptualization of forced migration processes. And, further, conceptualizing the motivations and processes occurring under forced migration conditions within the context of migration more broadly enables forced migration and refugee researchers to make contributions to the social scientific study of migration.

Changing Policy and Practice in Humanitarian Response

In recent decades, there have been many significant changes in policy and practice seeking to address the needs of populations displaced

by conflict. The emergence of other non-governmental organizations (NGOs) such as Médecins Sans Frontières, Save the Children, and the Office for the Coordination of Humanitarian Affairs (OCHA) as critical players in international humanitarian relief efforts, alongside governments and the UNHCR, has shifted the ways in which aid is administered to displaced persons. During the 1990s post-Cold War period, a series of conflicts and associated humanitarian emergencies erupted, leading to increased interventionism on an unprecedented scale by nations and NGOs of the global North. Since September 11, 2001, however, the face of conflict around the world has changed dramatically, requiring new policies and practices in humanitarian response (Stoddard 2003). Policy makers have recognized the existence of chronic conflicts and the need for humanitarian responses to engage in livelihood and development approaches, rather than simple disaster relief, as well as an acknowledgement of the need for culturally competent and sophisticated humanitarian policy and practice (Longley and Maxwell 2003; Macrae and Harmer 2004). Moreover, there has been a dual emphasis on nation-building and the continued rise of development discourses globally, which reflects concerns about relief dependency[6] following the large-scale expansion of relief efforts in the 1990s and the rise of anti-"welfare" discourses in the global North (Harvey and Lind 2005).

Alongside these changes in both the institutional and discursive structure surrounding humanitarian relief, several substantive changes in migration patterns and the demographic profile of the displaced have emerged. Most notably, there has been a rapid growth of displaced populations living in urban areas, relative to those in rural refugee and IDP camps (Agier 2011). Another important emerging issue is the increasing recognition of trauma and mental health issues as central to both the provision of public health and improving the capacity for livelihoods among displaced populations. Finally, there has been a development of a "cluster" approach to humanitarian interventions (which is also found in the development field) to enhance collaboration across UN agencies and other humanitarian actors, including military actors, who are increasingly involved in humanitarian relief.

Urban vs. Camp-Based Populations

With increased urbanization, more and more forced migrants are living in cities worldwide. Refugees and IDPs are increasingly dispersed within poor districts in urban areas, rather than concentrated in traditional rural refugee camps, and the policy community has recognized that this requires new approaches to humanitarian crises (Crisp et al. 2009). In 2007, the number of urban refugees worldwide surpassed the number living in camps for the first time, and by 2009, almost twice as many refugees were living in urban areas than in camps. As of the end of 2009, the vast majority (over 85 %) of urban refugees and IDPs were located in Asia and the Middle East, particularly in Afghanistan, Iran, Jordan, Pakistan, and Syria, but an increasing number are located in African and South American cities as well. Similarly, more than half of the world's IDPs live in urban areas (UNHCR 2011).

Displaced persons living in urban areas have a significantly different demographic profile than those staying in camps and the health risks and mortality patterns, particularly patterns of communicable disease, are very different. For example, UNHCR data indicates that urban-dwelling refugee and IDP populations are generally older, include fewer children, and include a substantially larger share of adult males than camp-based populations (UNHCR 2011). In terms of

[6] While refugees or IDPs are in camps they are not allowed to work for pay, a fact that causes many not to live in a camp but rather self-settle (Agier 2011). Dick (2002) in her study about Liberian refugees in the Bududuram refugee camp and self-settled refugees in Ghanaian towns concludes that they are not (totally) reliant on assistance. This is also confirmed by Omata (2012) who shows that Liberian refugees have continued to stay in Bududuram despite they drastically reduced aid. (See also Betts et al. 2014).

health risks, while urban refugees face food insecurity and other health challenges, they are less likely to be afflicted by widespread outbreaks of infectious disease than are traditional camp-based refugee populations. On the other hand, they may be more likely to suffer from and seek treatment for chronic health conditions such as heart disease and cancer (Spiegel 2011). However, relatively little is known about the precise numbers and profile of displaced persons living in urban settings relative to those in camp-based settings, since they are difficult to find and research (Couldrey and Herson 2010). Developing new methods and approaches for gathering demographic data on populations of urban refugees and IDPs is an increasingly important avenue for further research on forced migrants.

While the resources of host cities and countries are certainly strained by the addition of large numbers of refugees, refugees may be more likely to have access to health and sanitation infrastructure than they do in camps or dispersed in rural areas, and NGOs and relief agencies can theoretically draw on this infrastructure when delivering services. The UNHCR affirmed this approach in its 2009 statement on refugee protection and solutions in urban areas, stating that as a matter of practice, "UNHCR will avoid the establishment of separate and parallel services for its beneficiaries, and will instead seek to reinforce existing fully authorized delivery systems, whether they are public, private or community-based." (UNHCR 2009, 18) Yet, the dispersal of displaced persons into urban areas also presents significant challenges to providing humanitarian relief. It may be difficult for relief workers to find and engage populations in need of assistance, and it may also be difficult to distinguish the population that is the target of relief efforts from the extant population of the host city. Here it is also important to mention that some forced migrants avoid camps, even if that means they forgo legal protections and assistance, because they experience encampment as surrendering the control of their (daily) lives to the UNHCR and other agencies (Agier 2011). Relief agencies operating in urban areas typically provide services through existing networks and infrastructure to a greater extent than in camp-based settings, which can present unique political and administrative coordination challenges. Moreover, humanitarian relief agencies must consider new questions, such as what level of assistance to offer to avoid producing distortions in the economy of the host city, while enabling displaced persons to survive and, ideally, thrive in their host communities (Crisp et al. 2009). Perhaps the most important challenge for humanitarian relief organizations and policy-makers, however, is a more global one: restructuring the political, organizational, and funding infrastructure of their own institutions and networks from those oriented toward the needs of camp-based populations toward the needs of those displaced in urban areas or self-settled refugees and IDPs in general.

From the broader perspective of global urbanization, the rapid increase in the number of displaced persons living in urban areas exacerbates challenges already facing rapidly urbanizing societies and growing cities, particularly in the global South. Dense, diverse, and often very poor, the neighborhoods and cities that house the majority of urban migrants—both displaced people and rural economic migrants—are already under severe strain (Duisjens 2010). The movement of those displaced by conflict to nearby cities, which are sites of economic opportunity, also reflects the challenges outlined above of disentangling the dynamics of agency in forced migration.

Mental Health as an Emerging Public Health Concern

Although migration and health is discussed more thoroughly elsewhere in this volume (see Chap. 20, by Van Landingham, Nauman, and Anglewicz), we believe it is important to raise the issue of mental health, which may be a major challenge for forced migrants, especially when they have fled war or persecution. While the mental health repercussions of exposure to

conflict and trauma have long played a significant role in the lives of forced migrants, only since the 1980s has the issue emerged as a central concern for forced migration studies and humanitarian response to conflict (Eyber 2002). Physical health needs—including medical care and access to food, water, and shelter—remain critical for displaced populations, but the burden of mental health needs has commanded increased attention in recent years.

Most persons displaced by conflict suffer from extremely high rates of mental health issues associated with trauma, including post-traumatic stress disorder (PTSD),[7] psychotic illnesses, and anxiety disorders, as well as depression and other mental disorders. Studies of refugees resettled in Western countries have found that they are roughly ten times more likely to have PTSD than native-born populations of the same age (Fazel et al. 2005). The World Health Organization (WHO) (2012) estimates that out of the 50 million people displaced by conflict worldwide, more than half suffer from mental health problems, the vast majority of which are situational (rather than chronic) psychiatric morbidity, but which are unlikely to simply resolve themselves after resettlement. The number of displaced persons suffering from mental health problems is now significantly larger than the number of displaced persons affected by famine or disease during displacement (WHO 2012). Yet, according to the WHO (2012), resources for mental health services remain scarce, and humanitarian agencies have yet to adequately prioritize the provision of such services to displaced persons.

Several recent meta-analyses published in the *Journal of the American Medical Association* (JAMA) show that both severe and lasting psychological effects of conflict and displacement have been extensively documented for all different types of forced migrants, including conventional refugees and IDPs (Porter and Haslam 2005; Steel et al. 2009; Miller and Rasmussen 2010). Social and demographic characteristics of displaced persons and post-displacement conditions, housing instability and lack of economic opportunity are all linked with poor mental health status. In addition, experiences during displacement, including human rights abuses, threats and persecution, witnessing deaths, experiencing deaths of friends and family members, and being victimized by physical or sexual violence or torture, are strongly correlated with poor mental health status among forced migrants (Porter and Haslam 2005; Steel et al. 2009; Miller and Rasmussen 2010).

In addition to representing a serious need in its own right, mental health is closely related to physical health and mortality, as well as the capacity of refugees to support themselves, integrate into a host society, and develop sustainable livelihoods after resettlement. Poor mental health status among forced migrants is associated with reduced life expectancy and other measures of population health (Weinstein et al. 2000). In addition, poor mental health status among displaced persons is both caused by and determinative of significant difficulties in navigating displacement and resettlement. For forced migrants seeking to rebuild their lives or manage their livelihoods during a prolonged period of displacement, mental health issues can present a significant barrier (Connor 2010; Sher 2010). Thus, for both humanitarian relief agencies and policy makers, addressing mental health as a central part of public health interventions—both within communities affected by crises and among those displaced—is increasingly critical.

Cluster Approaches, Military Actors and Humanitarianism

Although the UNHCR is the primary agency responsible for assisting and protecting refugees, it has rarely been the only actor involved in responding to conflicts and crises that produce forced migrant flows. The recent growth in the numbers of IDPs relative to refugees, has also highlighted the limits of the UNHCR's mandate, which is limited to conventional refugees (those

[7] It is important to note that there is significant controversy about the diagnosis of PTSD, and particularly the applicability of "trauma" frameworks for understanding the experiences of refugees and other forced migrants.

who have crossed an international border), and its operational reach in many conflicts. The UN has developed a cluster approach for all major disasters and complex emergencies, in which each cluster (or sector) is led by the UN agency with the most expertise in that arena (e.g., health: WHO; education: United Nations Children's Fund (UNICEF), etc.). Coordination mechanisms exist across the agencies both globally and at the country-level (Global Protection Cluster Working Group 2009). The success of the cluster approach depends on the various fields and also the regular and active attendance of meetings to ensure that the planned work will be carried out. Frequently, agencies felt that there was a fair amount of duplication and that their input was not valued (see, for example, Action Aid 2007).

There has also been an expansion of militaries into humanitarian assistance roles. These issues have made coordination and collaboration among these various actors critical. Moreover, security concerns have become front and center for humanitarian actors who have increasingly been targeted directly by armed combatants. It is clear that they can no longer rely on perceptions of neutrality for safety. The military's expertise in security provision and its logistical capabilities often seem attractive for crisis and humanitarian relief efforts. Nevertheless, militaries' core missions are never going to become humanitarian. Increased dialogue and interaction between the military and humanitarian communities, particularly surrounding areas of protection of civilians, rules of engagement and the use of private military firms is ongoing and these issues are unlikely to be resolved immediately (Wheeler and Harmer 2006).

Displacement Outcomes

There are a number of possible resolutions to the dislocation and displacement experienced by forced migrants. The UNHCR proposes three durable solutions: repatriation to the home country, integration into the host country, or resettlement to a third country. During the Cold War, the vast majority of refugees were resettled in third countries as their flight was seen as "voting with their feet" against the communist regimes, and as such provided the United States an opportunity to make a political statement by giving shelter to them (see for example Agier 2011; Loescher 1996). In addition, Western European countries welcomed many of the refugees and ethnic IDPs as a needed labor force. With the changing (racial, ethnic, religious, etc.) composition of refugees worldwide and the dramatic increase in numbers, however, (voluntary) repatriation has become the UNHCR's preferred solution for forced migrants since the 1990s. Resettlement in a welcoming host country is now viewed as a reasonable third choice, but the majority of people displaced by conflict around the world do not experience either of these so-called "durable" outcomes. In fact, most people displaced by conflict currently live in conditions of protracted displacement, with little or no prospect of a solution that offers legal rights and the opportunity for stability and durable resolution of conditions of displacement (Zetter 2011). This issue has only recently received attention in the research literature, with the increasing use of the term "warehousing," (Smith 2004). According to Loescher and Milner (2012), in 2011 there were over seven million refugees and 27 million IDPs in protracted displacement situations. The situations are lasting longer too; the average length of stay is approaching 20 years, up from an average of 9 years in the early 1990s (Loescher and Milner 2012).

With the majority of forced migrants living in conditions of protracted or even permanent displacement—whether in refugee camps or, as discussed above, increasingly in urban areas—the plethora of studies focused on resettlement and voluntary repatriation in the forced migration literature seems disproportionate. This in many ways reflects both the hopes and ideals of researchers and humanitarians. Moreover, resettlement is of primary concern to Australia, New Zealand, and many European and North American countries which are regularly called upon to serve as permanent hosts for refugees for whom there is little hope of repatriation.

Furthermore, most researchers and resources for research are situated in the global North. This orientation is reflected in the research literature on resettlement, which, along with the broader literature on migration from less developed to more developed countries, has increasingly focused on themes and challenges around social integration, multiculturalism, transnationalism, and belonging.

Warehousing and Protracted Displacement

As mentioned above, estimates suggest that more than half of the worldwide population of displaced persons live in circumstances of prolonged displacement typically defined as 5 years or more but in many cases much longer, like the cases of Somali, Palestinian, and Sahrawi refugees show. Whether in urban or camp-based settings, these forced migrants are living in circumstances of perpetual instability and insecurity, without the legal rights and opportunities that they might experience were they able to safely repatriate or resettle in a third country.

Ongoing instability and a lack of good options for resolution of conditions of displacement might be seen as simply a regrettable circumstance resulting from conflict. However, in many cases, prolonged displacement through warehousing is less benign. Critics allege, and a number of case studies (including those of Palestinians, Afghan, Somali, South Sudanese, Bhutanese, and Burmese refugees) indicate, that in many cases these circumstances are the result of policies put in place by host countries which restrict mobility, employment, economic, and educational opportunities; displaced people are left in a state of material dependency and without the resources or legal rights in their new society that would be required to improve their circumstances (Smith 2004; Chen 2004; Loescher and Milner 2004, 2005a, b; Adelman 2008). This point is disputed, however, by researchers like Dick (2002), Omata (2012), Agier (2011), and Betts et al. (2014).

To the extent that the actions of host countries inhibit the freedom of displaced persons to live in dignity and pursue normal lives while awaiting a durable solution, those countries are in violation of the 1951 UNHCR Convention. Specifically, the 1951 UNHCR Convention protects displaced persons' right to work, freedom of movement, and opportunities for property ownership in their host country. In reality, though, most host countries refuse refugees these opportunities. Many refugees nevertheless pursue such opportunities as Agier (2011) demonstrates in his research from several refugee situations.

Warehousing is perhaps most typical in camps where displaced persons are essentially confined to a specific area and have little contact with non-camp populations. The production of concentrated populations of displaced individuals and families under these circumstances, persisting over time and without a clear path to resolution, seems to be a very particular and discrete type of community, which is highly constrained, dependent on humanitarian aid, and, all too typically, characterized by disease, violence, and exploitation (Smith 2004). However, similar issues of restricted opportunities are also widespread among displaced populations living in urban areas (Horst 2006). While the camp-based scenario is most common and persistent in Africa and some parts of Southeast Asia, the majority of displaced people today worldwide live in urban areas. Although these individuals are not geographically contained and isolated, they often have just as few rights and opportunities as those in camps, and they may not have legal status (Jacobsen 2006; Campbell 2006). This is clear in the circumstances of groups such as the Palestinians in Gaza, who live in a densely populated urban environment without the right of movement, and with severely restricted economic opportunities (Dumper 2009).

The framework and political discourse surrounding the issue of warehousing certainly suggests a gloomy set of circumstances for forced migrants in protracted refugee situations. However, the literature (Agier 2011; Dick 2002;

Omata 2012) suggests that even under these severely constrained circumstances, forced migrants are not passive victims, but continue to provide for their families and to be resilient despite the situation. Another topic, which has emerged in the literature on displaced persons only in the past decade, is that of livelihoods. The livelihoods concept maintains that poverty situations are diverse and multidimensional, and that displaced persons develop a number of strategies to negotiate their lives both inside and outside of camp settings. Rather than being entirely dependent on aid, displaced people engage in economic activities among themselves and with local populations, and utilize their social networks, skills, and experiences to improve their circumstances (Dick 2003). In addition, forced migrants make different decisions in terms of their own and their family's mobility such as: the decision of whether to return, to move to a specific camp or other community, to split families to better take advantage of available opportunities, or to engage in various other strategies. While the choices available to displaced persons are certainly highly constrained, rather than being passive victims, displaced persons often behave in extremely innovative and pro-active ways within these constraints (Horst 2006; Ludwig 2013). The mechanisms and processes used by displaced persons to make migration decisions and navigate their lives while displaced provide useful insights into the social scientific study of migration and livelihoods more broadly.

Forced Return or Repatriation

Ideally, repatriation would occur voluntarily, once conditions in the home country improve and it is safe for those displaced by conflict to return. However, despite the principle of *non-refoulement*, or the right of refugees under international law not to be forcibly returned to their home country where they are in danger of persecution (enshrined in the 1951 UNHCR Convention), this is not always the case. Involuntary return, or forced return or repatriation is relatively common and often occurs even before forced migrants cross an international border. When borders are closed to mass refugee flows, and refugees are forced to turn back, this is also a violation of the principle of *non-refoulement* (Long 2010). This is a point to which we will return later in the chapter.

Return migration is a complicated process, even when it is voluntary. Returning refugees or IDPs may find that their houses are no longer there or livable, or that others have moved into their homes or onto their land while they were gone. Infrastructure, including water, sanitation, roads, electrical systems, may have been devastated during a conflict and goods and services may still be difficult to access. Moreover, it is not necessarily a final stage or permanent state for some migrants, particularly those who do not want to return (Ruben et al. 2009). Researchers have begun to conceive of the process as one of mixed "embeddedness"—how returnees feel about their place and opportunities in society—rather than a simple reintegration. In other words, a refugee may not simply return to his or her home country and immediately feel at home again and be able to pick up where he or she left off. Successful reintegration or repatriation requires economic, social network, and psychosocial embeddedness for returnees to succeed (Ruben et al. 2009).

Although return and reintegration have been heavily promoted by many in the international community as necessary for successful post-conflict development and peace, it may, in many cases, be unsustainable and unrelated to development (Ruben et al. 2009). Returnees may have conflicts with those who remained behind and they may have little in common with the customs and culture of their (new) old homeland, but rather put additional pressure on weak states and systems resulting in further difficulties (Gmelch 1980; Koser and Black 1999). In addition, the paradigm shift from resettlement in third countries to repatriation frequently requires that victimized individuals and perpetrators have to live side by side (Mamdani 2002). Authors like Bradley (2008) emphasize the importance of truth-and-reconciliation commissions and

reparations for the repatriation to be successful. Conflict can also arise between the non-migrant population and the returnees when only the latter receive material and/or monetary help to rebuild their lives (see, for example, Eastmond and Öjendal 1999). Most of the time those who did not migrate also experience significant losses and sometimes feel that they are actually worse off than IDPs and refugees—who found refuge in camps—because they had to live through the war continuously (see, for example, Wright et al. 1998).

Statelessness

To be "stateless" means to be without citizenship; the right to nationality is part of the Universal Declaration of Human Rights and therefore it is a violation of that Declaration that there are an estimated 11 to 15 million stateless persons in the world (Goris et al. 2009). There are both *de jure* and *de facto* stateless persons; in other words, some people are not considered as nationals by any state under its laws, but some people simply lack the means to prove their nationality or, despite documentation of such nationality, are denied the rights afforded to them by their citizenship (Goris et al. 2009). The reasons for statelessness include: the political demise of a state with no citizenship in the successor state(s); changes in the way that citizenship laws are applied, including the political persecution of ethnic minorities; nomadic or frontier/border dwellers being denied citizenship by countries on both sides of the international border; individual legal circumstances, such as failure to register a birth or international move; and, potentially, small island nations whose entire populations will become stateless due to climate change (Goris et al. 2009).

Clearly the issue of statelessness is closely linked to migration (including forced migration), as there are millions of "precarious residents," or undocumented migrants who may not be actually stateless, but lack formal legal status in their country of residence; many of these may also be *de jure* or *de facto* refugees or IDPs (Gibney 2009). Some examples include: Palestinians living in the occupied territories, the Muslim Rohingyas in Burma, and "hill tribes" (e.g., Karen and Hmong) in northern Thailand. In fact, stateless persons often face quite similar challenges to forced migrants in that the denial of their rights prevents them from accessing other rights and resources and from bettering their own livelihoods. This promises to be an even more pressing issue in the coming decades as the phenomenon of statelessness and the denial of citizenship rights seems to be growing and has yet to be comprehensively dealt with on a global or regional level (van Waas 2009).

Methodological and Ethical Issues in Forced Migration Research

Research Methods and Sampling

Research with forced migrants is clearly affected by the mobility, insecurity, and temporality of the populations being studied. Voutira and Doná (2007) argue that recent changes in refugee policy and practice have affected the way in which researchers conduct their research. Some of these changes include: increased preoccupation with security; the shift to temporary protection statuses, under which forced migrants are granted legal residence in a host country for only a limited period of time with no guarantee of permanent asylum; and the proliferation of actors involved with refugee protection and relief. All of these changes mean that forced migrant populations are increasingly mobile, both physically and "bureaucratically", and that research often must take place in temporary spaces.

Traditionally, much refugee research in the social sciences was ethnographic or narrative (e.g., life history), which made research not always feasible, or it utilized administrative records and counts, which were not very informative and might be inaccurate because of the high mobility of forced migrant populations and their fear of persecution as well as incentives to

inflate household numbers to receive more food rations. In recent years, more social scientists have embraced survey methodologies and quantitative data to study forced migrant populations. This type of research, however, presents particular challenges, especially related to sampling. There is frequently the lack of a proper sampling frame; in camp-based settings this is less of an issue than it is among self-settled populations or other elusive forced migrant populations.

Statisticians have developed various techniques for sampling highly mobile or elusive populations, including: screening for characteristics, disproportionate stratification, multiplicity sampling, snowballing, location sampling, spatial and cluster sampling, sequential sampling, and capture-recapture methods (Kalton 2001). Although we do not review these methods comprehensively here, they have been covered elsewhere in the literature (see, for example: Kalton 1991; Malilay et al. 1995; Brown et al. 2000; Reed and Keely 2001). The basic premise behind these methods is to attempt to identify more members of the (forced migrant) population in order to include them in the sample, while still maintaining the ability to compute accurate statistics and reduce bias.

In recent years, various forced migration research projects have adopted some of these techniques, such as snowball sampling, with multiple entry points (Sulaiman-Hill and Thompson 2011) or multi-stage cluster sampling (Jacobsen and Landau 2003), with mixed results (Vigneswaran 2009). Bloch (2007) argues that assembling an adequate sampling frame for forced migrant populations is impossible, and she advocates for using convenience sampling methods, although with as much rigor as possible. Jacobsen and Landau (2003), however, although they fully recognize the so-called "dual imperative" of refugee research (policy vs. scholarship), argue that representative sampling methods should remain the first choice for forced migration researchers as it is their ethical responsibility to ensure scientific rigor in their research.

Other Practical and Ethical Issues

Access to populations is a major issue in forced migration research. In addition to the physical barriers that may prevent researchers from accessing refugee and IDP populations, there are bureaucratic and political barriers erected by host governments, the UN and other agencies that must be negotiated and overcome. Furthermore, refugees, mainly residing in poor conditions in camps or detention centers in developing countries, are often excluded from doing research themselves. Research resources and networks are centered in the global North, while refugee populations are centered in the global South. This skews the research agendas, processes, and outcomes in particular ways. Harrell-Bond and Voutira (2007) note that originally forced migration research was done by refugees themselves, but now refugees are increasingly isolated from the research process. Appadurai (2006) argues that the 'right to research' is fundamental and should be democratized so that people everywhere have knowledge of the broader world and the ability to improve their own circumstances. Refugees and other forced migrants are frequently denied many of their rights, and the right to research is one of these. Hugman et al. (2011) promote a participatory action research (PAR) model to ensure that the refugees' human agency is sustained. Their main argument focuses on the issue of giving informed consent. Refugees and other forced migrants may agree to participate in a research study, but the likelihood that they can successfully make claims against the researchers if their rights are disrespected is slim, given their remote location and lack of resources. In their proposed PAR model, forced migrants are an integral component of the entire research project, from the inception of the research question through the dissemination of the findings.

Even the funding and conduct of research among forced migrant populations is fraught with ethical conundrums. Some researchers argue that it is impossible to conduct ethical

research with forced migrants because they can never give proper informed consent,[8] but if we continually exclude refugees and IDPs from research, we do them another disservice, by failing to learn about their communities, their circumstances, and their health, and perhaps by failing to validate humanitarian interventions that could help other populations in the future (Reed and Keely 2001; Birman 2005). Yet, researchers must be cautious to respect different cultural values, protect forced migrants' rights and guard their confidentiality, and avoid coercion (Birman 2005).

Current and Future Research Areas

The field of forced migration is ever evolving and as such new challenges are focus of ongoing research. We selected some areas that highlight the current trends in the field.

Categories of Forced Migrants

One central question in forced migration studies surrounds the issue of who is a forced migrant. The status of "refugee" has the clearest legal definition and thus, can be seen as "the most privileged among many inferior statuses" (Zetter 2007, 189). However, the definition in the 1951 UNHCR Convention also has its shortcomings and is more aligned with earlier refugee crises than current ones. Most of today's refugees are not escaping a "clear-cut war and sudden mass exodus" (Zetter 2007, 178) but rather fleeing ongoing oppression of ethnic and religious minorities (e.g., Kurds under Saddam Hussein, the Rohingya in Burma) or civil war-like situations (e.g., Democratic Republic of Congo). Regional instruments such as the 1969 Organisation of African Unity (OAU) Convention and 1984 Cartagena Declaration in Latin America have tried to fill in the gaps of the 1951 UNHCR Convention's definition. In effect, these regional instruments extend the definition of refugees to persons who flee their country of origin because of foreign aggression, foreign domination, and events seriously disturbing public order. The OAU Convention also includes occupation, while the Cartagena Declaration also includes massive violations of human rights and internal conflict. The Cartagena Declaration is not a legally binding document; however, its provisions are widely recognized as customary law in Central America and it has actually become domestic law in Mexico. Just as the legal definitions have evolved to keep up with the changing realities of forced migrants, so have the analytical categories in academic research. Given the brevity of this chapter we are only able to briefly discuss a few (re)discovered categories of forced migrants. All categories share an element of coercion in their displacement.

Many forced migrants use the same travel routes and networks as economic migrants (Castles and Miller 2003; Zetter 2007) to try to travel to the global North, in particular to European countries. Since "legal refugee status" has not been granted to them, they enter these countries as asylum seekers and consequently are not afforded the same rights as refugees would be. Even more importantly the *non-refoulement* clause does not apply and governments are not required to grant asylum (Betts 2010). Another way of excluding individuals from full refugee status are statuses that guarantee temporary protection, such as Temporary Protective Status (TPS) and Deferred Enforced Departure (DED) in the U.S., *Duldung* ("Tolerated") for about 350,000 Bosnian refugees in Germany in the 1990s, and Discretionary Leave to Remain in the UK. It also should be noted that there is "no basis in international law for temporary protection" (Zetter 2007, 181). According to Nyers (2003), this tendency to grant only temporary refuge reflects the common view that governments in the global North and the media in these countries

[8] Hugman et al. (2011) describe that consent forms for research with refugees are approved by university internal review boards (IRBs), but that this does not address the issue that refugees—living in precarious situations in faraway places—do not have the means to seek redress in case of unethical or abusive research practices.

have about foreigners. Instead of assuming that they are *bona fide* refugees or forced migrants, they are accused of being bogus asylum seekers, economic migrants, terrorists or criminals.

Different categories of forced migration are not unique to the global North. However, the focus is different. As discussed above, the trend in the global North is to create different legal types of forced migrants to exclude more and more people from the refugee category according to the 1951 UNHCR Convention, and consequently grant fewer rights to forced migrants. The focus in the global South is different; forced migrants are also excluded from protection, but for different reasons. Drawing on his research on forced migration in Mozambique, Lubkemann (2008) raises the concern that certain types of forced migrants are overlooked both in research and in policy. One of these groups are what he refers to as "displaced in place" (455)—individuals who were forced to remain in the same place during the war (of course, these are not truly migrants, but might be thought of as forced stayers). Another type of forced migrants are individuals who had left their home country as labor migrants prior to the war and who had to remain abroad during the war (Lubkemann 2008) or (labor) migrants who found themselves trafficked (Betts 2010). Consequently, Lubkemann (2008) argues that we should rethink "forced migration studies—which implies movement is a prerequisite," because, as these examples show, movement is not always applicable; he suggests we should also consider cases of "involuntary immobilization" (468). Self-settled refugees also experience this fate; being left out of research and policy because most research on refugees in the global South takes place in refugee camp settings rather than among self-settled communities (Bakewell 2008).

Conversely, media, scholars, and policy makers, motivated to both call attention to the desperate situation of individuals and to invoke the rights granted with the status, frequently resort to labeling different types of displaced individuals as refugees. Examples of this practice include "environmental refugee," "tsunami refugee," and "development refugee" (Zetter 2007), but also New Orleans residents who fled the city after hurricane Katrina ("Katrina refugees") (Gordon 2009; Masquelier 2006). Zetter (2007, 176) criticizes the use of the label to identify forced migrants who are not refugees according to the 1951 UNHCR Convention, because the "structural causes and consequences" of the flight—which according to Kunz (1973, 1981) are essential to the refugee experience— are "inadequately interpreted" (Zetter 2007, 176).

Burden-Sharing

With the ever increasing number of forced migrants globally, the concept of burden-sharing has gained again in significance. The concept first was elaborated in the Preamble (paragraph 4) of the 1951 UNHCR Convention, which states that granting "asylum may place unduly heavy burdens on certain countries" and thus required "international co-operation." States participate in burden-sharing in two different ways: financial or "physical." In the first case, states in the global North pledge support to states in the global South—which continue to host most of the world's refugees and IDPs—with financial contributions which frequently come in the form of payments to the UNHCR or other international organizations (Zetter 2007). While this may be interpreted as a generous act on the part of the global North, some authors like Betts (2003, 2010) caution that many of these contributions are earmarked—often targeting refugee crises in former colonies—to curtail potential asylum flows from these countries.[9] In addition, Betts (2011) asserts that many of the refugee-causing conflicts have their origins in (neo)colonialism.

A second aspect of the burden-sharing concept applies to the dispersal of refugees among different countries. The first organized effort of that sort was the resettlement of Hungarian refugees who fled in the 1950s. Since then shared resettlement efforts have been part of the burden-

[9] Refugees often seek asylum in their former colonial powers.

sharing approach. But again, frequently states in the global North pursue the resettlement of particular national, ethnic, or religious groups which reflect their global political position. For example, an analysis of the U.S. refugee arrival data from the Office of Refugee Resettlement (ORR) of the Department of Health and Human Services. These data (available at www.wrapsnet.org) date back to the late 1970s and show that the geographic origin of the various refugee waves correspond with U.S. military interventions. In the case of the European Union (EU), the most recent development—the Joint EU Resettlement Programme, which was first announced in September 2009—embodies both aspects of the burden-sharing concept; first, as it aims at addressing refugee crises outside of Europe to prevent potential asylum seekers from coming to Europe, and second, with its focus on "sharing the burden" (Robinson et al. 2003) that refugees represent among EU countries (Commission of the European Communities 2009).

Forced Migrants as a Security Threat

Betts (2010) observes that the securitization of international travel is one aspect of continuing globalization which especially affects forced migrants. As stated earlier, the same travel routes are used by different individuals: regular or irregular economic migrants, refugees, and people who traffic humans and illegal goods. Governments, in their quest to secure borders and protect their nations from both terrorists and unwanted migrants, sometimes tend to lump any migrant, including refugees and asylum seekers, together with traffickers and treat them as a threat. Muslim refugees have been particularly affected by this scrutiny in states in both the global North and the global South.

In addition, refugees in refugee camps are frequently thought of as potential warrior recruits (Zolberg et al. 1989; Adelman 2001) and sometimes they are (e.g., Rwandan Hutus in the Democratic Republic of Congo (then Zaire) in the 1990s). In a more recent example, this has led states in the global North to donate funds to Kenya to continue to monitor Somali refugees. In addition, host countries in the global South sometimes join their own nationals in accusing refugees of being a security threat to the host country (e.g., Burundian refugees in Tanzania) and/or as a factor in the increase of illegal activities such as prostitution (e.g., Liberian refugees in Ghana (Ludwig 2014)). However, this also plays out in the global North, where right-wing political parties and the media continue to depict "refugees [as] opportunists who seek personal progress at the expense of a naïve public [. . .] [and who are] credited with all manner of social ills" (Nassari 2009, 5).

Conclusion

The field of forced migration is ever-evolving given the increasing number of individuals who are displaced by armed conflicts and natural and man-made disasters. This importance is reflected in the growing attention that the issue of forced migration receives in academic scholarship and the changing policy approaches of NGOs working with forced migrants, but also in states' responses toward forced migrants. Consequently, it is difficult to provide a clear, all-encompassing definition of forced migration. What we can say with certainty is that all forced migrants experience an element of coercion and involuntary (im)mobility, yet many are able to retain some sense of agency despite their lack of complete control over their circumstances.

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Index

M.J. White (ed.), *International Handbook of Migration and Population Distribution*,
International Handbooks of Population 6, DOI 10.1007/978-94-017-7282-2