John F. May

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Their Origin, Evolution, and Impact

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ISBN 978-94-007-2836-3 ISBN 978-94-007-2837-0 (eBook)
DOI 10.1007/978-94-007-2837-0
Springer Dordrecht Heidelberg New York London

Library of Congress Control Number: 2012934457

Printed on acid-free paper

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

To my wife, Anne, this book is lovingly dedicated

Foreword

While concern about the balance between population growth and available resources has been around since the time of the Rev. Thomas Malthus more than 200 years ago, public policies to influence population variables have a much more recent provenance. Malthus despaired, of course, that unless the increase in human numbers could be brought under control, food production would inevitably fall further and further behind population growth with the result being ever-increasing hunger and poverty for a great majority of people. He urged the institutions of his time to take action to slow down the growth of human numbers, although the means for doing so were few and the response was minimal.

Modern population policies, at least at a national level, had to wait 150 years, until the early 1950s when, as a result of the first round of post-World War II censuses, UN demographers suddenly came to realize that populations were growing at unprecedented rates, particularly in Asia. Concern began to spread about an impending "population explosion" and, echoing Malthus's earlier alarms, international leaders began calling for action to stem this rapid growth. The year 1952 might be identified as the beginning of an international population "movement" that brought about increasingly collective action among nations over the next 40 years. In 1952 two important international institutions were born – the International Planned Parenthood Federation and the Population Council – that arguably led the drive for collective global action over the next 20 years; and India announced the world's first national population policy – a commitment to reduce birth rates through a national family planning effort.

It would be nice to report that the movement that sprang from these early seeds flourished and grew with uniform speed and impact throughout the world, but as John May eloquently demonstrates in this volume, that was hardly the case. Through the first 20 years after 1952, global recognition of a population problem grew rather slowly and only a few nations, nearly all of them in Asia, decided to take action to slow down demographic growth. Among those that began to take action in the 1960s were India's South Asian neighbors, Sri Lanka and Pakistan, followed soon thereafter

by Singapore, Taiwan and South Korea, Indonesia and Thailand. By the late 1960s, many of the larger Asian nations had adopted population policies, nearly all of them consisting principally of family planning service programs.

While the programs in East and Southeast Asia for the most part thrived and were quite successful in bringing birth rates down, those that had started a decade or so earlier in India and Pakistan did not. The South Asian programs achieved very disappointing results and, perhaps because they were the earliest and the most closely studied, gave rise to increasing pessimism in many circles about how effective family planning programs by themselves could be in reducing fertility. Many academic demographers, long skeptical about how enthusiastically individual couples would respond to voluntary family planning programs, saw in the disappointing South Asian results confirmation that much more was needed to stimulate demand for smaller families. Thus, calls began for measures "beyond family planning" – actions to stimulate the desire for smaller families or to directly reward those who achieved them. These ranged from relatively indirect parallel measures such as improving girls' access to education and reducing under-five mortality rates, to more active interventions such as monetary incentives to use contraceptives or to limit births, to more draconian actions including rationing access to housing based on small family size or paying people to undergo sterilization. Policymakers in India had become so frustrated by the failure of voluntary family planning efforts that they turned increasingly to such solutions, culminating in the coercive sterilization campaigns during the so-called Emergency of 1975–1977. Chinese authorities, with their "One-Child Policy", resorted to similarly coercive policies shortly thereafter.

Alongside the skeptical demographers were two prominent groups of economists who were also dubious about the international population movement. One group challenged the Malthusian notion that rapid population growth was, in fact, an impediment to economic growth and development. The other challenged the belief that voluntary family planning would have significant appeal to low income, primarily rural households in developing countries for whom large families represented what they perceived to be a rational response to poverty, the need for household and agricultural labor, and for whom children represented a source of security in old age. Given their prominence and influence as advisers to governments, such economists played an important role in counteracting the advice many governments were receiving from elsewhere in the international community.

John May tells the story of how the series of international population conferences that ran from Bucharest in 1974, through Mexico City in 1984, to Cairo in 1994 gradually created a global consensus in favor of a broad developmental approach to population policy, an approach that emphasized: the empowerment of women, improvements in maternal and young child health, voluntary family planning embedded in a broader reproductive health framework, and the protection of individual reproductive rights – the so-called Cairo Consensus. He shows how the success of voluntary programs in many countries, as well as the excesses that produced human rights abuses in others, contributed to this consensus and how demographic changes over the past two or three decades have produced new concerns and

new policy discussions about excessively low birth rates, rapid population aging, and high rates of international migration. This book tells how difficult these issues are in developed countries as population aging challenges the survival of the post-industrial socioeconomic model and immigration is often perceived as a threat to national identities.

Today, only China can be said to maintain a population policy that falls outside the broad framework of the Cairo Consensus. While spectacularly successful in reducing fertility (China's fertility rate is well below the replacement level of approximately two children per woman), there have been serious unanticipated consequences of China's policy, namely, a badly skewed sex ratio resulting in many more boys than girls; and a population that is now aging so rapidly as to raise serious concerns about future labor supply to sustain China's impressive economic growth.

This book would be important if it did nothing more than explain how population policies have evolved and what their impacts have been, for it represents by far the most exhaustive and comprehensive treatment of this historically important subject written to date. But it does much more. It highlights the paramount importance of understanding underlying demographic trends when assessing the development prospects of any country. As such, it offers a much needed long-term perspective that is so important for any policymaker. In this sense, it is of particular importance for what it has to say to governments in sub-Saharan Africa that are today still facing the problem of extremely high fertility and rapid population growth. Africa remains the last region still experiencing runaway population growth and governments there are beginning to come to grips with the problem. The countries of Southern Africa are in the lead but many other states are now taking actions that are likely to bear results over the next 15–20 years. Only Central and West African governments remain resistant to taking firm steps to confront their unsustainably high fertility. This book, written by a man who has spent many years working in the region and with first-hand experience with its problems, provides important insights to guide population policy development in Africa and one hopes that African leaders will be guided by the wisdom and advice contained in this volume.

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About the Author

John F. May, a Belgian national, is a Lead Demographer at the World Bank, and a specialist in population policies and programs. Prior to joining the World Bank in 1997, he worked on many population projects around the world for UNFPA, UNICEF, USAID, and the International Union for the Scientific Study of Population (IUSSP). He was posted in Haiti, West Indies, and New Caledonia, South Pacific for the United Nations. He came to the US in 1987 and was appointed Senior Scientist at The Futures Group International, a consulting firm offering services in population and HIV/AIDS modeling, policy, and program design. In 1991–1992, he spent a year as a Visiting Scholar at the Population Reference Bureau (PRB) and was a PRB Visiting Scholar again in 2006, 2007, and 2011. He is also an Adjunct Professor of Demography at Georgetown University, Washington, DC. He earned a BA in Modern History (1973) and a MA in Demography (1985) from the Catholic University of Louvain (Belgium), and a Doctorate in Demography (1996) from the University of Paris-V (Sorbonne).

Disclaimer

The findings, interpretations, and conclusions expressed herein are those of the author and do not necessarily reflect the views of the Board of Executive Directors of the World Bank or the governments they represent.

Acknowledgments

This book has been long in the making. The initial idea was suggested many years ago by Jean-Claude Chesnais. He had in mind a comprehensive volume on world population policies that would be based on concrete examples of how population policies are actually implemented. Thereafter, he read the entire manuscript, and so did Karar Zunaid Ahsan, William P. Butz, Barbara Crane, Hazel Denton, Anton Dobronogov, Léon Gani, Pierre Gschwindt de Gyor, Karen Hardee, and Françoise May. To all of them, I express my deepest gratitude for their invaluable comments.

Thanks are due to my editors at Springer, Evelien Bakker and Bernadette Deelen-Mans, who supported the project from day one and helped bring it to completion.

Several anonymous reviewers provided feedback at different stages during the preparation of the book and I would like to acknowledge their contributions.

The Population Reference Bureau (PRB) offered a quiet haven to think and write during several sabbatical periods, for which I am most grateful.

Particular thanks are due to four outstanding research assistants who provided major support, namely Angela M. Kao, Natalie Menser, Jane Remme, and Alex Shilo. I could not have completed this book without their efficient help. Jane Remme, in particular, played a pivotal role during the preparation of the manuscript and I want to acknowledge her major contributions.

My gratitude goes also to Meghan Cagley, who skillfully edited the manuscript and Nicole Hamon, who helped with administrative matters.

The literature review proved to be a gigantic task for a study of this scope and I am most indebted to the staff of the World Bank Group Library for their efficient help, in particular Turan A. Atay, Eliza J. Mcleod, Julia Y.B. Poblete, and Don A. Upendra.

Several colleagues read entire chapters and provide constructive comments. I am particularly grateful to Nada Chaya, Chloë Fèvre, Carl Haub, Charles H. Teller, and Giuseppe Zampaglione.

This book could never have been completed without the help of many others colleagues, librarians, friends, and family members. I want to thank Sara Adkins-Blanch, Lori S. Ashford, Isabelle Attané, Prospère R. Backiny-Yetna, Hubert Balique, Stan Bernstein, Kipper Blakeley, Ed Bos, Don Bundy, Martha M. Campbell,

Yves Charbit, Sadia Afroze Chowdhury, Richard P. Cincotta, Julia Cleaver, Maria-Eugenia Cosio-Zavala, Jacques Crosnier, Monica Das Gupta, Henry P. David (1923–2009), John P. Davis, Antoine de Romanet de Beaune, Peter J. Donaldson, Yohana Dukhan, Enéas Gakusi, Patrick Gerland, Gannon Gillespie, Tom Goliber, Jean-Pierre Guengant, Davidson R. Gwatkin, Reem Hafez, Alain Holleville, Rachel Hoy Deussom, Rubina Hussain, Corinne Ilgun, Alan G. Johnston, Mary M. Kent, Monica Kerrigan, Marya Khan, Hans Küng, Rama Lakshminarayanan, Jean-Louis Lamboray, Gilles Landrivon, Michel-Louis Lévy, Anna Lipchitz, Elizabeth Lule, Wolfgang Lutz, Lallianzuali H. Malsawma, Robert Maurer, Alexandra May, Lionel May, Gisèle Maynard-Tucker, William P. McGreevey, Thomas W. Merrick, Michael Micklin, Vinod Mishra, Nicole Nardo, Rachel Nugent, Thomas F. O'Herron, Elio Omobono, Ok Pannenborg, Dudley L. Poston, Malcolm Potts, Stephanie Pozuelos, Hantamalala Rafalimanana, Alexander Ritter, Warren C. Robinson, Farzaneh Roudi-Fahimi, Elisabeth Sandor, Alex Schratz, Gilda Sedgh, Jeremy Shiffman, Susheela Singh, Richard Skolnik, Rhonda R. Smith, Agnès Soucat, John Stover, Toru Suzuki, Robert Toubon, Tyjen Tsai, Marcel Vekemans, Mechai Viravaidya, Christine Wattelar, Rebecca Wind, Guillaume Wunsch, and Kanako Yamashita-Allen.

In many different ways, every person I contacted during the preparation of this volume provided help and offered comments, ideas, and suggestions. Needless to say, the remaining errors are entirely mine.

Contents

List of Abbreviations

ABC	Abstain, Be faithful, use Condoms
ACS	American Community Survey (US)
AFD	*Agence française de développement* (French Development Agency)
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARTs	Assisted Reproductive Technologies
ASCOFAME	*Asociación Colombiana de Facultades de Medicina* (Colombian Association of Medical Schools)
BCC	Behavior Change Communication
BCG	Bacille Calmette-Guérin vaccine
BEMFAM	*Bem-Estar Familiar no Brasil* (Brazilian Society for Family Welfare)
BKKBN	*Badan Koordinasi Keluarga Berencana Nasional* (Indonesian Population and Family Information Network)
bn	Billion
BRAC	Bangladesh Rural Advancement Committee
CASS	Chinese Academy of Social Sciences
CBD	Community-Based Distribution
CDC	Centers for Disease Control and Prevention (US)
CGD	Center for Global Development (Washington, DC)
CHC	Commune Health Center (Vietnam)
CONAPO	*Consejo Nacional de Poblacion* (Mexican National Council on Population)
CPR	Contraceptive Prevalence Rate
CPS	Contraceptive Prevalence Survey
DALY	Disability-Adjusted Life Year
DDT	Dichloro-Diphenyl-Trichloroethane
DFID	UK Department for International Development

DHS	Demographic and Health Survey
DPT	Diphtheria, Pertussis, and Tetanus
ECOSOC	UN Economic and Social Council
Ed.	Editor
Edit.	Edition
Eds.	Editors
ENGAGE	Eliminating National Gaps – Advancing Global Equity
EPI	Expanded Program on Immunization
EU	European Union
EUR	Euro
FGC/FGM	Female Genital Cutting/Mutilation
FIGO	International Federation of Gynecology and Obstetrics
FWA	Female Welfare Assistant (Bangladesh)
FWV	Female Welfare Visitor (Bangladesh)
GAVI	Global Alliance for Vaccines and Immunisation (now GAVI Alliance)
GDP	Gross Domestic Product
GEC	Global Economic Crisis (2008)
GF/ATM	Global Fund for AIDS, Tuberculosis, and Malaria
GIS	Geographic Information System
GIZ	Gesellschaft für Internationale Zusammenarbeit
GNI	Gross National Income
GPA	Global Program on AIDS
GTP	Growth and Transformation Plan (Ethiopia)
GTZ	*Gesellschaft für Technische Zusammenarbeit* (German Technical Cooperation Corporation)
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HNP	Health, Nutrition and Population
Ibid.	*Ibidem* (same place)
ICD	Infectious and Communicable Disease
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
ICPD	International Conference on Population and Development (Cairo 1994)
IEC	Information, Education, and Communication
IIASA	International Institute for Applied Systems Analysis
ILO	International Labour Organization
INED	*Institut national d'études démographiques* (French National Institute for Demographic Studies)
IOM	International Organization for Migration
IPCC	International Panel on Climate Change
IPPF	International Planned Parenthood Federation
IUD	Intra-Uterine Device

IUSIPP	International Union for the Scientific Investigation of Population Problems
IUSSP	International Union for the Scientific Study of Population
IVF	*In vitro* Fertilization
JOICFP	Japanese Organization for International Cooperation in Family Planning
kg	Kilogram
KPI	Key Performance Indicator
LDC	Least Developed Country
MAP	Multi-Country HIV/AIDS Program for Africa
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MMR	Maternal Mortality Ratio
m	Million
MoFED	Ministry of Finance and Economic Development (Ethiopia)
MPI	Multidimensional Poverty Index
MR	Menstrual Regulation
NAPA	National Adaptation Programmes of Action
NAS	US National Academy of Sciences
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
NIA	US National Institute on Aging
NPP	National Population Policy
OECD	Organisation for Economic Co-operation and Development
ORT	Oral Rehydration Therapy
PAA	Population Association of America
PAC	Post-Abortion Care
PAHO	Pan American Health Organization
PAI	Population Action International
PASDEP	Plan for Accelerated and Sustained Development to End Poverty (Ethiopia)
PCC	Population Crisis Committee
PDA	Population and Community Development Association (Thailand)
PEPFAR	US President's Emergency Plan for AIDS Relief
PHN	Population, Health and Nutrition
PPP	Purchase Power Parity
PRB	Population Reference Bureau
PROFAMILIA	*Asociación Probienestar de la Familia Colombiana* (Association for the Welfare of the Colombian Family)
PSIDS	Pacific Small Island Developing States

QALY	Quality-Adjusted Life Year
RAPID	Resources for the Awareness of Population Impact on Development
RBF	Results-Based Financing
RCT	Randomized Control Trial
RH	Reproductive Health
RTI	Reproductive Tract Infection
SARS	Severe Acute Respiratory Syndrome
SCAP	Supreme Commander of the Allied Powers (Japan)
SDPRP	Sustainable Development and Poverty Reduction Program (Ethiopia)
sq. km	Square kilometer
SSA	Sub-Saharan Africa
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
Suppl.	Supplement
TB	Tuberculosis
TFR	Total Fertility Rate
UK	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNODC	United Nations Office for Drugs and Crime
US	United States of America
USAID	US Agency for International Development
USD	US Dollar
USSR	Union of Soviet Socialist Republics
Vol.	Volume
VVF	Vesico-Vaginal Fistula
WDR	World Development Report (World Bank)
WFP	World Food Programme
WFS	World Fertility Survey
WHA	World Health Assembly
WHO	World Health Organization
WHS	World Health Survey
WPPA	World Population Plan of Action

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Chapter 1
General Introduction

All over the world, unrelenting demographic transformations are at work with many significant consequences. Despite the HIV/AIDS epidemic, rapid population growth in Western and Central Africa portends future crises of food shortage, youth unemployment, and possibly civil unrest. Through risky means, poor emigrants (mostly from Africa, Haiti, and South Central and Southeast Asia) desperately seek to reach more hospitable grounds or shores. In the Middle East, the large youth population is craving better employment opportunities and a brighter future. Meanwhile, Russia's demographic profile foreshadows a calamitous fall in its population. Consequently, Chinese settlers might come to Siberia because dwindling indigenous populations will no longer be able to administer huge territories. Entire countries, for example Germany and Japan, slowly but inexorably face a "gray winter" due to population aging. Everywhere, migrants, legal or illegal, are on the move making our world more globalized and interconnected, despite its fragmentation into more than 240 countries and geopolitical entities. These migratory movements also contribute to social and political tensions in the receiving countries.

Future demographic outcomes are determined by levels of fertility and mortality, internal and international migrations, and annual rates of growth. Population numbers and densities are important but are far from being the only variables shaping our demographic future. Fertility, in particular, is paramount because to a large extent it determines the age structure, the dependency ratios, and the relative size of the labor force. However migration is also important because migratory movements compound the effects of fertility on the age structure and directly impact the size and composition of the active population.

Ultimately, individuals and families are the ones who determine future demographic outcomes. Individuals decide on the number of children they have, although an estimated 215m women still lack access to, and often information on, family planning services. Individuals also decide whether or not to migrate. All these decisions are influenced by a number of variables including education, gender imbalances, culture, religion, poverty, and inequity.

Population policies, or the lack of such policies, play a key role in influencing individual behavior and shaping demographic trends. Population policies are defined

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_1,

as actions taken explicitly or implicitly by public authorities, in order to prevent, delay, or address imbalances between demographic changes, on the one hand, and social, economic, and political goals, on the other.[1] Their purpose is to adjust the population size, growth, composition, and distribution to the realities of the economy, as well as to address people's needs and rights. Public policies, designed to tackle population issues in view of the greater good, are far from new. For example, the Roman Emperor Augustus (63BC–14AD, Emperor from 27BC until his death) promulgated two laws on marriage and another one on adultery with the objective to increase fertility levels among the upper classes (Gardner 1998: 47–55).

This book will focus on population policies as a way to show that population issues are not only a private matter, but also a public concern. As such, population issues cannot be put aside or overlooked. They call for proactive interventions. Countries that have adopted population policies have been able to influence their demographic outcomes and have generally reaped substantial benefits from doing so.

Overall Context of Population Policies

During most of the last half of the twentieth century, three sets of issues have dominated the population policy debate. First, in the developing countries,[2] population policies have focused on measures to reduce high fertility rates that failed to adjust to falling, and sometimes rather low, mortality rates, thus causing acceleration in population growth rates. In the 1960s and 1970s, the rationale for such interventions was to address the economic, social, and environmental impacts of rapid population growth. Thereafter, in the 1980s, policies sought to directly address high fertility levels under the assumption that smaller families would improve economic and health conditions (Levine et al. 2006: 1075). Whatever their rationale, interventions sometimes had very specific purposes, such as avoidance of famines, improvement of maternal, infant and child health, or mitigation of the spread of unsafe abortions. Second, in the developed countries, policy also focused on population aging (defined as an increasing proportion of people aged 65+), immigration that resulted from labor force shortages and, in some countries, the implications of sub-replacement fertility. Finally, around the same time, the attention of the policy community has also been drawn to the demographic, economic, and social implications of the HIV/AIDS

[1] The term "population" covers two main areas: reproductive, maternal, and sexual health issues and the health services that address them, and the levels and trends in births, deaths, and migration that determine population growth and age structure and have an impact on economic growth and other sectors; see World Bank (2007b: 1).

[2] This book uses the United Nations' classification of the more developed, the less developed, and the least developed countries (LDCs), the latter category being a sub-group of the less developed countries; see footnote 4 in Chap. 2. For the sake of brevity, however, it will use "developed" or industrialized for more developed countries and "developing" for less developed countries (these terms are not judgmental, but used only for convenience).

pandemic as well as the resurgence of tuberculosis and the burden of malaria, particularly in sub-Saharan Africa but also in other parts of the world.

As the twentieth century entered its last decade, the political climate for population policy also changed. A series of international conferences, most notably the International Conference on Population and Development (ICPD) held in Cairo in September 1994, called for a shift from traditional population control approaches to strategies emphasizing the health and welfare of individuals. This new focus superseded top-down population interventions that were perceived to be adversely undermining human rights and gender equity (Ashford 1995, 2001; Eager 2004). The need to empower women (for example, through education and economic opportunities) and foster their well-being was particularly stressed. In addition, the demographic and epidemiological conditions that generated earlier policy responses changed. Many regions in the developing countries were on their way to completing the transition to low fertility and population growth. However, exceptions to this pattern can still be found in most of the least developed countries (LDCs). Moreover, in sub-Saharan Africa, the persistence of high fertility levels (above five children per woman on average) and the HIV/AIDS epidemic continue to undermine efforts to reduce poverty.

Despite these new demographic challenges, population policies seem to have gone out of fashion from their heyday in the 1970s and 1980s, when they primarily tackled high fertility levels and ways to reduce them (Robinson and Ross 2007a). At that time, fertility levels actually declined and population growth rates slowed down, partly due to the successes of policy interventions. Today, however, it appears that the population policy agenda has lost its *raison d'être* and is harder to define. Funding of population and family planning programs has also decreased.

This situation can be ascribed to a set of different factors. First of all, there is a pervasive feeling that the "population problem", namely rapid population growth, has been resolved once and for all because of falling fertility levels (Blanc and Tsui 2005). This view was endorsed in a recent inquiry of *The Economist* (2009), which unfortunately failed to fully grasp the concept of population momentum and overlooked the particular situation of sub-Saharan Africa. In addition, the steady performance of the world economy over the past decade prior to the global economic crisis (GEC) of September 2008, gave credence to the idea that expanding populations could be provided for after all. Some policymakers have come to see population aging, essentially caused by below-replacement fertility, and depopulation as the next major challenges. Public policies must also confront a host of new issues, such as the HIV/AIDS epidemic and poverty alleviation efforts, not to mention the problems of environment, climate change, food prices, water supply, energy, urbanization, and security. In addition, human rights and equity considerations have come to dominate the public discourse.

Yet about 16% of the world population lives in countries where fertility levels and population growth rates are still high. Public health professionals point to the unfinished agenda of providing family planning services to 215m underserved women around the world (Singh et al. 2009b). Some researchers are also calling for more attention to demographics, as they are linked to environmental and security

issues (Cincotta et al. 2003; Sciubba 2010).[3] Nonetheless, despite all the major challenges still at hand, population issues seem to have fallen off the international agenda. A striking "indicator" of this situation is the reluctance of young professionals to embark on the study of demography.

Second, in the beginning of the twenty-first century, the world is also more demographically fragmented and more complex than ever, displaying a much broader spectrum of demographic issues and social challenges. Some countries, like Niger, still experience very fast population growth driven by declining mortality and very high fertility (among the highest in the world; see World Bank 2005). Some others, like Russia, are now challenged by population aging and depopulation and are also affected by negative population momentum. Europe, Canada, Japan, and a number of other Asian countries must confront below-replacement fertility levels, population aging, and sometimes large-scale immigration. There is also a global demographic divide, namely a vast gulf in birth and death rates among the world's regions and countries. The mostly rich countries experience low birth rates and aging populations, whilst the mostly poor countries have high birth rates and low life expectancies (Kent and Haub 2005).

Third, formidable new transnational forces have come into play as well. This process, conveniently called globalization,[4] encompasses rapidly increasing international trade, cheaper transportation systems, instant communications, and larger migratory movements. To some extent, these forces have changed the traditional *modus operandi* of population policies. Top-down approaches are no longer suitable to address the complexity of issues or to tackle the increasing numbers of actors and stakeholders. The legitimacy of states' interventions[5] has also been challenged by greater access to information, direct democracy, and citizenry participation. The Internet and easy communications have modified the way information flows as well as implementation mechanisms of public policies.

Fourth, the international paradigms in population are also blurred. The 1994 ICPD has probably contributed unintentionally to this state of affairs, albeit it could be argued that Cairo's recommendations have been poorly understood and even less well funded and implemented (Sinding 2005). Nonetheless, ever since Cairo, the

[3]The terrorist attacks of September 11, 2001 have triggered new discussions on the possible linkages between population pressure and terrorism. It has been hypothesized that in some Muslim societies numerous disenfranchised young men could not find economic opportunities and therefore became "easy targets for radicalization"; see National Commission on Terrorist Attacks Upon the United States. (2004). *The 9/11 Commission report: Final report of the National Commission on Terrorist Attacks Upon the United States* (Authorized Edit., pp. 53–54). New York: W.W. Norton.

[4]Globalization can be defined as "the rapid integration of national markets for goods and services, capital, and labor through free trade". Today, it is estimated that at least three billion people worldwide benefit from globalization. The previous economic boom took place in the 1950s and 1960s and benefited about 300m people, mostly in Europe, Japan, and the US; see Yardeni, E. (2007, August 1). Global wealth will act as an economic shock absorber. *Financial Times* (US Edit.).

[5]In this book, the word "state" refers to national (or federal) states and/or sub-national states.

right to operate through public interventions in what is deemed to be the realm of private citizens' lives has been challenged. Proponents of individual reproductive rights and freedom have gained the upper-hand. Discussions of macro-demographic issues have been delegitimized. In addition, the Millennium Development Goals (MDGs) adopted at the 2000 Millennium Summit, which were meant to provide a broader framework for development (UNDP 2003), did not initially include reproductive health. This omission further marginalized specific population and reproductive health agendas (Campbell White et al. 2006).

More complexity has been added to an already confused picture by what William Butz (2006) aptly calls the "implosionist" and "explosionist" advocacy divide. Discussions on population issues, he contends, are dominated by pessimists, either on the implosion side (aging and shrinking populations caused mostly by below-replacement fertility) or the explosion side (rapid demographic growth and environmental degradation, brought by high fertility and/or unsustainable levels of consumption). In the same vein, one could presumably oppose the believers in convergence (identical demographic regimes are spreading fast around the globe) and the proponents of divergence (every situation is unique and global trends cannot and will not apply everywhere). Such opposing approaches do not enrich the debate, but rather antagonize actors in entrenched and un-reconciled positions.

In all these discussions, one should not discount the role of pre-conceived ideas, gender biases, and sometimes ideology. Public authorities have often been reluctant to challenge entrenched cultural norms. For too long fertility has been perceived as being solely a women's issue. Several religions, particularly Roman Catholicism, have opposed liberal attitudes regarding reproductive rights, the needs of adolescents, and the access to abortion. Some economists have long been skeptical about the existence of any connection between population growth and economic outcomes (see, for instance, Easterly 2001). They also doubt the feasibility of carrying out fertility reduction programs in low resource settings. Family planning activists have clashed with family planning skeptics. Situations are often analyzed through different lenses, and according to the writers' perspectives. Bangladesh is a good case in point: while Cleland and colleagues (1994) have argued that family planning efforts played a key role in that country's fertility decline, other scholars have asserted that the change was chiefly triggered by improvements in female education (Adnan 2002).

Last but not least, a factor worth mentioning is the high number of different constituencies and stakeholders active in the area of population, family planning, reproductive health, and HIV/AIDS programs. In a way, the demographic fragmentation of the world has been mirrored by a similar fragmentation of actors, players, donors, and population institutions. Moreover, too many institutions and non-governmental organizations (NGOs)[6] appear to support their own limited mandates as they also struggle for resources that are less abundant than before (Sinding 2005). A good example of this situation is the criticism that was leveled at a thoughtful paper on

[6]In 2006, there were 40,000 NGOs worldwide, of which "3,000 have consultative status at the United Nations, triple the 1995 number"; see Lerrick, A. (2006, August 2). Good intentions at the expense of the poor. *Financial Times* (US Edit.).

population growth in sub-Saharan Africa. HIV/AIDS activists felt it was unfair to stress the persistence of rapid population growth-related problems in that region, as their chief concern remained the adverse socioeconomic impact of the HIV/AIDS epidemic (Cleland and Sinding 2005).

As mentioned, the demographic trends and social challenges in the twentieth century encompass many more issues than before and the word "population" covers a variety of topics (World Bank 2007b: 1). Inevitably, new, varied, and complex situations as well as innovative ways to do business will require evolving policy responses. Pressing issues, such as rapid population growth and the HIV/AIDS epidemic in the LDCs, and below-replacement fertility, population aging, and immigration in the developed countries call for urgent policy decisions.

The main rationale for this book is that there is no "end of history" in sight for the designers of population policies. Although the role of public policies and the provision of public goods have been challenged, they urgently need to be redefined and repositioned. New evidence has also become available that will help reframe the debate on the relationships between demography and economics (Birdsall et al. 2001). Despite numerous studies devoted to population policies, there are no comprehensive books that have been dedicated to this area. No recent studies have attempted to present a synthesis of the field of population policies and chart the way forward, at a time when international development paradigms are changing substantially. This work, an expansion of the *Population Policy* chapter in the *Handbook of Population* edited by Poston and Micklin (May 2005), looks at the development of population policies over the last 60 years and assesses what population policies can do and will need to do in the future.

The approach adopted here is to illustrate the exposition and analysis of population policies design, formulation, implementation, and evaluation with concrete examples in order to show how population policies[7] are actually implemented and what their constraints are. Therefore, this book documents population policies, their mechanisms and their actors and stakeholders, and evaluates successes and/or failures of different interventions using a comparative method (comparison and evaluation of various policies). Moreover, population policies are approached here from the standpoint of the demographic, epidemiological, and migratory transitions (Chesnais 1992).

Accordingly, the book provides a unifying perspective on population policies. It addresses population issues during each phase of the transitions, including those defined by fertility (high or low) as well as other issues linked to mortality, migration (national and international), and population aging. The book examines the role of the state and other actors and stakeholders in population policy design, implementation, and evaluation. It analyzes population policies within the broader context of international politics, transnational forces (including migration), new development paradigms, changing disease patterns, and new social trends and concerns (e.g., maternal

[7]Given the increasing diversification of policy interventions, the book uses most often the plural, i.e., population policies.

mortality and adolescents). It also touches upon the population politics (e.g., the abortion debate in the US). The scope is worldwide and therefore the book covers the more developed, the less developed, and the least developed countries.

Outline of the Book

The book is constructed along eight main chapters. Numerous case studies from around the world provide concrete examples of population policies or elements thereof (e.g., data collection efforts). These examples are either embedded in the text or presented in specific sections under the heading "*Focus*". Given the broad scope of the book, a lot of information has been taken from three population encyclopedias (Demeny and McNicoll 2003; Poston and Micklin 2005; Caselli et al. 2006). Most data come from the United Nations Population Division and the Population Reference Bureau. References are presented at the end of the volume, along with a Glossary of technical terms.

Chapter 2, *World Population Trends and Issues* sets the stage. It covers the period between 1950 and 2010 and intends to demonstrate that population issues matter, and so do population policies. The chapter first describes the diversity of the contemporary demographic landscape. It then presents the theory of the demographic and epidemiological transitions, including their criticisms, and explains how these transitions have shaped current demographic patterns (this section covers also the HIV/AIDS epidemic). In a next step, the chapter shows that countries range from situations of high to below-replacement fertility, and explains which countries face the challenge of population aging. The chapter also attempts to chart future population growth (using population projections between 2010 and 2050), including changing age structures. It then analyzes how the socioeconomic fabric of several countries is being further defined by international migration (i.e., migratory transition). The chapter concludes with a discussion of old and new demographic issues. Nowadays, demographic challenges are less defined by problems of population growth and size than by issues of age structure, aging, migration, and ethnic composition. The youth bulge (i.e., the large proportion of youth aged 15–29 in the population above age 15) is a challenge of years to come in some countries, and so are the rapid aging processes that will have far-reaching implications for the size of the labor force and sustainability of developed economies (e.g., fiscal space[8]).

Chapter 3, *Population Policies Framework* defines population policies, explains their rationale, and describes their modes of operation. This is the conceptual chapter, which offers a review of the theories and approaches to interventions on population variables. This chapter first addresses the key question: What are population policies? After offering a definition, the chapter discusses Malthusian, Marxist, and

[8]Defined as the "room in a government's budget that allows it to provide resources or a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy"; see Heller (2005).

Boserupian views on the subject of population and examines the relationships between demographic variables and socioeconomic development. The chapter also explains the new human rights approach toward population and reproductive health issues. Thereafter, it attempts to answer several questions, each being treated as a single section. These are: Which demographic variables are open to interventions? What is the nature of the policy development process and who contributes to it (i.e., who are the actors)? What are the different modes of action or modalities of population policies implementation? What are the contextual variables, such as education, health, and employment that may also have an impact on population interventions? An analysis of population policies in sub-Saharan Africa completes the chapter.

Chapter 4, *First Public Health and Population Programs* analyzes the initial efforts in the areas of mortality reduction and the delivery of family planning services in the three decades that followed World War II. This chapter first reviews efforts to reduce mortality, especially infant and child (under-five) mortality. Initial declines in mortality rates (e.g., in colonial times) were often achieved through large scale sanitation programs. In some countries, such as Sri Lanka, malaria control campaigns helped also reduce mortality levels. The use of oral rehydration salts, known as oral rehydration therapy (ORT), also brought impressive results, as experimented in Bangladesh in the 1970s. These initial endeavors to reduce mortality levels were followed by programs addressing specific diseases, such as *onchocerciasis* (river blindness), smallpox, polio, and malaria. Subsequently, expanded immunization programs were launched on a massive scale. The chapter then turns to the launch of family planning programs at national level, including abortion-related policies. It describes the experiences of bringing down high fertility levels among forerunner countries such as Japan and India, and later Egypt. The chapter then analyzes the expansion of family planning programs that followed, and the rapid increase in the use of modern contraception as well as the different explanatory theories that have been proposed (e.g., socioeconomic development threshold vs. attitudinal and ideational changes). The chapter mostly focuses on developing countries, but also describes how developed countries intervened to support these efforts. It covers what has been called the international family planning movement (also known as the *Population Movement*), and offers an insight into the role of population and family planning activists such as Mechai Viravaidya in Thailand.

Chapter 5, *Internationalization of Population Issues* first addresses the international population doctrines and the various ideologies that support them. To do so, it uses the three population policy phases proposed by Finkle and Crane (1990), namely the will to control population pressure (from 1965 to 1974), the demographic variable planning phase (from 1974 to 1981), and the competitive pluralism approach (since 1981). It illustrates this framework with the example of Colombia, and then extends the framework with an analysis of the aftermath of the 1994 ICPD held in Cairo. The chapter discusses also the emergence of population institutions as well as population programs within the bilateral and multilateral donor agencies with a focus on France. It summarizes the achievements of the major international population conferences, organized in Bucharest (1974), Mexico (1984), and Cairo (1994), which contributed in part to the creation of the new population institutions (the chapter also covers other important international

conferences, including those on women and environment issues). It then addresses the new developments and the old controversies in the area of population and reproductive rights. The major controversy about abortion, stoked by the hostile approach of the religious right to modern contraception and abortion has marked the last 15 years since the Cairo Conference, particularly in the United States. This has influenced policies, both domestically and internationally, and has determined how US-funded overseas development projects could use federal funds allocated to population and reproductive health. The chapter then places the issue of population in the context of the MDGs and the crucial relevance of demographics for their achievement. Thereafter, it assesses the launch of international efforts to better monitor population trends and perceptions (e.g., efforts to collect demographic data), most notably under the aegis of the Population Division of the United Nations. Finally, the chapter examines the role played by the widespread availability of population projections in the policy dialogue with governments. It also describes the new refinements brought to these population projections (e.g., from extrapolation of trend-based projections to policy- and program-oriented projections and, more recently, to science-based projections).

Chapter 6, *Population Policies in Developing Countries* shows how, over a period of several decades, initial endeavors to reduce mortality and fertility levels were gradually expanded to become broad-based population policies; the realm of population policies grew considerably and became more comprehensive and ambitious. Population policies helped address new issues such as reproductive rights, the improvement of women's status, and the protection of the environment. This chapter first examines how family planning spread around the world and it looks at the role induced abortion played in reducing fertility levels in developing countries (using the example of Vietnam). It then analyzes the shift from family planning interventions to reproductive health programs, with a focus on excision. The shift to reproductive rights was linked to the emergence of human rights considerations and the preeminence of the feminist agenda, particularly at the 1994 ICPD in Cairo. Thereafter, the chapter describes the adoption process of formal population policies, which sometimes took place through prescriptive recommendations made during international population conferences. The next section is devoted to the indirect actions on fertility and gender issues, since female education and women's empowerment further reshaped classic interventions on population variables. The chapter then tackles migration trends, either within a country, often in the form of urbanization (internal migration), or internationally. To address population pressure or reverse some migratory movements, transmigration programs were implemented (the most notable example being in Indonesia). Population policies also had to accommodate the new agenda of environment and sustainable development, which gained more attention since the late 1960s (a case study is provided for Haiti). Finally, population policies were compelled to address the HIV/AIDS epidemic, and particularly the linkages between reproductive health and HIV programs.

Chapter 7, *Population Policies in Developed Countries* analyzes the demographic situation of the countries that are confronted with post-transitional imbalances. Developed countries are faced with three main problems, namely sub-fertility, population aging, and immigration (including its ethnic composition aftermath).

The policy responses that have been adopted (or not) will have far-reaching consequences for the sustainability of the socioeconomic achievements of these countries. This chapter first examines the main issues related to sub-replacement fertility, focuses on the motivations for childbearing, and reviews examples of fertility interventions that have been proposed in France and other countries (e.g., the former German Democratic Republic) as well as in Asia (see, for instance, Grant et al. 2004). Second, the chapter addresses the issue of population aging and its foreseeable consequences, for example for fiscal space and macro-economic stability. The third section addresses immigration policies (with an analysis of the US) and refugee migration's trends, on which reliable data are not always available. This section also covers the effects, as well as the economic impact, of international migrations. The chapter then deals with the relationship between population policies and social regulations, which are illustrated through examples taken from Western European countries. The chapter proceeds to discuss family policies and their diversity (depending on the desired outcomes), which is illustrated by comparing family policies in Italy and Sweden, two countries with very different cultures and demographic profiles. The final section highlights the difficulties of the policy dialogue on population issues, which are perceived as very sensitive in developed countries and have often led to a polarization of the public debate; this point is illustrated with an analysis of the Roman Catholic views on modern contraception.

Chapter 8, *Effectiveness of Population Policies* analyzes one of the most difficult questions regarding population policies, i.e., their impact (Jain 1998). The analysis of policies and the assessment of their effectiveness is brought about through a comparison of various policies (using the method of benchmarking), as well as an examination of key population indicators and their measurement. This chapter first presents the evaluation methodology used for population policies and methods used to assess their impact. Turning to family planning programs, it presents an overview of the progress of contraceptive coverage throughout the world, both in developed and developing countries. It analyzes also the controversial experiment of the One-Child Policy (1979) in China. The chapter then deals with broader policy interventions, particularly in the area of fertility. This is illustrated with the case of Ethiopia, where female education has contributed to a sharp fertility decline, especially in urban areas. The following section covers the role of advocacy and policy dialogue in enabling the design of population policies. The experience of economically more advanced countries is a historical indicator of the effectiveness of some population policies. Their experience also highlights that it is easier to reduce fertility than to increase it. Finally, the chapter deals with the modeling of population policies and programs, and highlights the importance of the political process. It also introduces key tools and approaches, including the Bongaarts' model of the proximate determinants of fertility.

Chapter 9, *Future Prospects for Population Policies* offers suggestions to chart the way forward. The diversity regarding the completion of the demographic transition[9] *among* but also *within* continents, regions, and countries (e.g., the urban-rural

[9] In several countries, fertility transitions have stalled; see Bongaarts (2006).

divide) has changed the context in which population policies operate. These policies are now confronted with a much larger range of issues than before, including the aftermath of international migrations. Consequently, they are forced to reassess their priorities and sharpen their intervention strategies. The first section of the chapter looks at the new demographic landscape. The following section outlines certain renewed concerns that are increasingly present on the international development aid agenda, namely the issues of environment and climate change, poverty, inequity, and security. The chapter then turns to the new priority constituencies, i.e., women, adolescents and youth, old people, and migrants, who are most vulnerable. It then examines the challenge of urbanization, which by 2050 will determine the fate of almost two-thirds of the world population. The chapter also covers some of the new bioethical and gender issues relating to population policies, and addresses one of the major gender concerns, namely the phenomenon of "missing" girls in some Asian countries. Finally, the chapter analyzes the need for building a new consensus around broad common goals within population policies (using the example of Bangladesh), along with the need to enhance both the coordination and effectiveness of population policies.

The *General Conclusion* summarizes the major findings of the book, with key recommendations for the future. To a large extent, population policies, or the absence of such policies, will determine the demographic evolution of human societies. The attainment of the goals to reduce poverty and inequity is also dependent on the outcomes of population and reproductive health programs. Similarly, overall food security goals (and consequently levels of malnutrition) will derive from the success of population policies, as half of these goals are related to fertility levels (Collomb 1999). Finally, the fulfillment of the MDGs, of which several pertain to, or depend on, population and reproductive health outcomes, is also closely linked to the effectiveness of population policies.

It appears that the major challenge for population policies in the twenty-first century will be to link interventions in the area of population and reproductive health to new and broader development issues. These are the reduction of poverty, the promotion of equity, the mitigation of the HIV/AIDS epidemic, the improvement of gender balance, the accommodation of youth requirements, the prevention of conflicts and violence, the preservation of the balance between population and the environment (and climate change), and the overall sustainability of socioeconomic achievements.

Population policies are a means to an end; they are not ends in themselves. However, governments sometimes believe they can sidestep population and reproductive rights issues, and reach their socioeconomic development goals in other ways (e.g., through female education). They find it hard to address population and reproductive health issues head-on, because of human rights concerns, cultural and religious barriers, or political backlash. Nonetheless, population policies are still needed because unfortunately, most often, there is no short-cut. Far from being old-fashioned, population policies are more important and more relevant than ever.

Chapter 2
World Population Trends and Issues

Facts do not cease to exist
because they are ignored.

Aldous Huxley (1894–1963)
British writer

This chapter covers the period from 1950 to 2010, with projections of demographic trends to 2050. It describes the diversity of the world demographic landscape, outlines future population trends, and analyzes present and future population issues. It intends to highlight the fact that population issues matter, and so do population policies.

The interactions between the movement (births, deaths, and migrations) and the structure (most commonly represented by the age pyramid) determine future demographic outcomes. Both the demographic movement and the age structure do change during the demographic transition. These processes have far-reaching consequences for future socioeconomic development prospects, in particular through modifications in the size and age composition of the labor force.

However, the demographic transition has not started everywhere at the same time, nor is it a uniform process. It may happen rapidly or slowly, and it occurs in different ways. Internal and international migrations may also take place during the demographic transition. All these phenomena may lead to demographic imbalances, which can be corrected through the design and implementation of population policies.

This chapter first presents the world demographic patterns and trends, as well as the demographic and epidemiological transitions, and analyzes the HIV/AIDS epidemic. Thereafter, it categorizes the world nations into high, medium, and low fertility countries, and shows how future fertility declines will affect the rate of population growth and changes in the age structures. The chapter then covers the migratory transition theory and the new characteristics of international migration. Finally, it examines old and new demographic issues, with an analysis of the demographic hotspots and "cold spots".

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_2, © Springer Science+Business Media B.V. 2012

World Demographic Patterns and Trends

At mid-2010, the world population was estimated at 6.9bn people.[1] The annual growth rate of the world population was of 1.2%, a decline from 2.0% in the period 1965–1970 (this was the highest annual growth rate of the world population in recorded history; see United Nations 2009d: 4). Demographic growth has thus slowed down, although this trend has been mitigated by the relatively young age structure brought about by high fertility levels of the past (phenomenon of population momentum). In absolute numbers, the annual increase of the world population has also diminished, from a maximum of 88.8m people added per year in the period 1985–1990 to 79.4m added annually during the years 2000–2005 (United Nations 2009d: 48).[2]

Between 1950 and 2010, the world experienced dramatic demographic changes, as illustrated in Table 2.1.[3] First, the world population grew from 2.5bn in 1950 to 6.9bn in 2010, an increase of almost 4.5bn people. Second, the demographic contrast (in absolute numbers) between developed and developing regions[4] has been widening: the ratio was about one to two in 1950 and is one to four and a half in 2010. Most of the demographic growth has taken place in the global South and this trend will continue. In particular, the group of the 49 least developed countries (LDCs),[5] mostly low

[1] Most numbers used in this book come from either the United Nations Population Division (2008 population projections) or the Population Reference Bureau (which publishes a yearly World Population Data Sheet based on estimates issued by national statistics offices around the world).

[2] Three recent books describe the global population patterns and trends: Bongaarts and Bulatao (2000), Bouvier and Bertrand (1999), and Lutz et al. (2004b).

[3] This book uses population projections of the United Nations Population Division. Other organizations, e.g., the US Bureau of the Census and the World Bank, also prepare (but not necessarily publish) population projections.

[4] The United Nations categorizes the regions of the world into the more developed, the less developed, and the least developed countries (LDCs), the latter category being a sub-group of the less developed countries. The developed regions include Europe, Northern America, Australia, New Zealand, and Japan (the last three countries being an exception to the criterion of regional classification). The developing countries are located in Africa, Asia (excluding Japan), Latin America and the Caribbean, plus Melanesia, Micronesia, and Polynesia in Oceania (excluding Australia and New Zealand); see United Nations (2009d: xii).

[5] The LDCs, a sub-group of the less developed countries, include: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, São Tomé and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, and Zambia. Among the LDCs, 17 are landlocked and most of these countries are in sub-Saharan Africa; see United Nations (2009d: xii). The list of LDCs may evolve: South Sudan, a new country as of 2011, will join the group, but other countries may become full-fledged less developed countries as their development performances increase.

Table 2.1 Population of the world, major development groups, and major areas, 1950 and 1975, and projections for 2010 and 2050 (2008 UN Medium variant)

	Population (m)			
Major area	1950	1975	2010	2050
World	2529	4061	6909	9150
More developed regions	812	1047	1237	1275
Less developed regions	1717	3014	5671	7875
Least developed countries	200	357	855	1672
Africa	227	419	1033	1998
Asia	1403	2379	4167	5231
Europe	547	676	733	691
Latin America and the Caribbean	167	323	589	729
Northern America	172	242	352	448
Oceania	13	21	36	51

Source: United Nations (2009d): 3, 48, 50, 52, 54, 62, 74, 84, 94, 102 & 104

Map 2.1 Least developed countries

income countries (see Map 2.1),[6] is still confronting a very rapid population growth. Third, Asia and Africa together make up today three-quarters of the world population. Fourth, Africa has the fastest population growth in the world: its population more than quadrupled between 1960 and 2010 and this trend will also continue, albeit at a slower

[6]The World Bank's main criterion for classifying economies is the gross national income (GNI) per capita, calculated by means of the *World Bank Atlas* method. Every economy is classified as low-income, middle-income (subdivided into lower middle- and upper middle-income), or high-income. Low- and middle-income countries are sometimes referred to as developing countries. Low-income economies are those with a GNI per capita of USD975 or less. Middle-income economies are those with a GNI per capita of more than USD975 but less than USD11,906. Lower middle-income and upper middle-income countries are separated at a GNI of USD3,855. High-income economies are those with a GNI of USD11,906 or more (the GNI per capita refers to the year 2008); see World Bank (2010a: xxiii).

pace should fertility decline rapidly. Fifth, Europe is the only region in the world where population will decline in the first half of the twenty-first century, due to the situation in Eastern Europe and, particularly, Russia.

Even though the "world population" is striking, because of its very large size, it remains in many ways a misleading abstraction (Sauvy 1949). In reality, the various populations that compose the world population are distributed among 240 different countries and geopolitical entities,[7] with varying geographic and demographic sizes, unequal resources, different levels of socioeconomic development, and specific demographic issues and prospects. Furthermore, large countries (e.g., Brazil, China, India, Nigeria, the US, etc.) can also experience different demographic regimes *within* their borders. Finally, countries can be ethnically homogenous or not, and can be more or less integrated economically and politically into regional aggregates. This brief analysis will be carried out at country level, because population policies are essentially designed and implemented at national level, despite increasing transnational influences.

The population size of these 240 countries and geopolitical entities varies enormously, and a very large share of the world population is distributed among a relatively small number of big countries. According to Chasteland and Chesnais (2002), 18 countries contain currently two-thirds of the world population (see Map 2.2).[8] These big countries had in 2002, or would reach before 2025, a population larger than 100m – Iran and Turkey coming fairly close to the 100m mark (see Table 2.2). In 2010, these 18 big countries made up 69% of the world population. Only three big countries (i.e., China, India, and the US) accounted for 41% of the world population. By 2050, Tanzania and Uganda may also qualify as big countries, which would bring the tally of big countries to 20. Also by 2050, the proportion of the 20 big countries' populations as part of the world population is projected to be 68.4%. By then, the ranking of the current big countries according to their demographic weight will also be different. India, with 1.75bn inhabitants, will be the most populated country in the world and will have surpassed China's population at around 2030 (Haub and Sharma 2006: 3).

Asia is the planet's demographic heavy-weight: it represented 60% of the world population in 2010, with China and India alone accounting for almost 37% of human mankind. In addition to these two big countries, Asia comprises eight other demographic giants as defined by Chasteland and Chesnais (2002), a total of 10 of the world's 18 most populated countries. Within Asia, the Indian sub-continent's

[7] In its annual World Population Data Sheet, the Population Reference Bureau publishes data for more than 200 countries and geopolitical entities. Adopting the nomenclature of the United Nations, it presents the countries and geopolitical entities of the world for 18 regions, as follows: Africa (Northern, Western, Eastern, Middle, and Southern Africa); Northern America; Latin America/Caribbean (Central America, Caribbean, and South America); Asia (Western, South Central, Southeast, and East Asia); Europe (Northern, Western, Eastern, and Southern Europe); and Oceania. Sub-Saharan Africa encompasses all countries of Africa, except the Northern African countries of Algeria, Egypt, Libya, Morocco, Tunisia, and Western Sahara.

[8] This book will pay particular attention to the population policies of the 18 big countries.

Map 2.2 The 18 big countries and the two potential big countries

Table 2.2 The 18 big countries: population in 2010 and projected population in 2025 and 2050 (2008 UN Medium variant)

	Population (m)					
	2010	2025	2050	2010	2025	2050
Country/year				%	%	%
China	1338.1	1476.0	1437.0	19.4	18.2	15.1
India	1188.8	1444.5	1748.0	17.2	17.8	18.4
US	309.6	351.4	422.6	4.5	4.3	4.5
Indonesia	235.5	273.2	309.4	3.4	3.4	3.3
Brazil	193.3	212.4	215.3	2.8	2.6	2.3
Pakistan	184.8	246.3	335.2	2.7	3.0	3.5
Bangladesh	164.4	195.0	222.5	2.4	2.4	2.3
Nigeria	158.3	217.4	326.4	2.3	2.7	3.4
Russia	141.9	140.8	126.7	2.1	1.7	1.3
Japan	127.4	119.3	95.2	1.8	1.5	1.0
Mexico	110.6	123.4	129.0	1.6	1.5	1.4
Philippines	94.0	117.6	140.5	1.4	1.5	1.5
Vietnam	88.9	103.2	113.7	1.3	1.3	1.2
Ethiopia	85.0	119.8	173.8	1.2	1.5	1.8
Egypt	80.4	103.6	137.7	1.2	1.3	1.5
Iran	75.1	87.1	97.0	1.1	1.1	1.0
Turkey	73.6	85.0	94.7	1.1	1.0	1.0
Congo, Dem. Rep.	67.8	101.4	166.2	1.0	1.3	1.8
Total 18 big countries	4717.5	5517.4	6290.9	68.4	68.0	66.3
World population	6892.3	8108.3	9485.4	100.0	100.0	100.0

Source: Population Reference Bureau (2010a)
Note: Figures for China do not include populations of Hong Kong and Macao

population is growing faster than the East Asian countries that experienced their demographic transition sooner.

The remaining eight big countries of the world are distributed evenly among the other continents. Northern America has two big countries, the US and Mexico, and South America one, Brazil, which has about half of the population of that region.[9] Europe (with less than 11% of the world population in 2010) has only one big country: Russia. Finally, Africa (15% of the world population in 2010) has four demographic giants: Egypt, Ethiopia, Nigeria, and the Democratic Republic of the Congo (formerly Zaïre). Oceania (half a percent of the world population in 2010) has no big country.

This analysis of the 18 big countries highlights the fragmentation of the remaining 32% or so of the world population into more than 220 countries and geopolitical entities. The other countries of the world are much smaller. This has important consequences for the design and implementation of population policies, as these processes are usually carried out at national level. In addition to the 18 demographic giants, only 15 countries had more than 40m inhabitants by mid-2010. They were, in decreasing order of population size, Germany, Thailand, France, United Kingdom, Italy, Myanmar (formerly Burma), South Africa, South Korea, Spain, Ukraine, Colombia, Tanzania, Sudan, Argentina, and Kenya.[10] Together, the 18 big countries and those 15 mid-size countries (33 countries altogether) accounted for almost 80% of the world population in 2010.

Next, 50 countries had between 10m and 40m inhabitants in mid-2010, as follows: 20 countries in Africa, Canada in Northern America, seven countries in South America, 13 in Asia (including Taiwan), eight in Europe, and one (Australia) in Oceania. Finally, in mid-2010, more than 150 countries and geopolitical entities had less than ten million inhabitants. Among these territories, there were 80 micro-countries with fewer than one million people each: these include the numerous micro-states of the Caribbean and Oceania.

From a geographical perspective, populations are also distributed unevenly around the globe. As mentioned, Asia alone has 60% of the world's population. From Turkey to Vietnam, seven of the ten big Asian countries form an almost uninterrupted geographic entity (and China shares a border with the Eastern part of Russia). Asia also has two of the three most densely populated regions of the world: East China and the region that includes India, Pakistan, and Bangladesh (the third such region is Western Europe). On the contrary, populations are scattered in South America (Ecuador and Colombia are its two most densely populated countries). Population is even more scattered in Africa, which is also more politically

[9] In 2010, the Western Hemisphere had about 13% of the world population.

[10] Four European countries (Germany, France, United Kingdom, and Italy) were among the ten big countries in 1950, but are now second-tier countries because of the very rapid demographic growth that occurred in the other regions of the world.

fragmented into 57 countries. Two exceptions stand out in sub-Saharan Africa: Nigeria, which had 158.3m people in mid-2010, almost one-fifth of the total population of the region, and the block formed by Ethiopia, Kenya, Tanzania, and Uganda (203.8m people in mid-2010, almost one-quarter of the total population of sub-Saharan Africa).

Some countries of the world are very sparsely populated: Mongolia and Namibia have an average of only two and three people per sq. km, respectively (among the lowest population densities in the world). Only three people live per sq. km in Australia, Botswana, and Canada.

The socioeconomic achievements of individual countries vary widely. In 2010, more than 82% of the world population lived in developing countries (Population Reference Bureau 2010a), whereas only 68% did so in 1950 (United Nations 2009d: 3). In 2010, more than 12% of the world population lived in the LDCs. Many other classifications (e.g., by health, income distribution, ethnic status, religious affiliation, etc.) can be put forward to describe the diversity of demographic and socioeconomic patterns across and within countries. For instance, incomes widely vary within countries, and often rich people in developing countries have much more in common with middle-income people in developed countries than with the poorest among their fellow citizens.

Last but not least, more and more people live in cities. In 2010, 50% of the world population lives in an urban area (75% in the more, 44% in the less, and 27% in the least developed countries, respectively). Only 30% of the world population was urbanized in 1950, but about two-thirds of the world population (six billion people) will live in urban areas[11] in 2050. In 2010, the United Nations identified 21 megacities (cities of more than ten million inhabitants), compared to only two in 1950 (New York-Newark and Tokyo).[12] Africa as a whole is the world's least urbanized region (38%; only the South Central Asia sub-region is less urbanized), but Africa is also the region of the world that is urbanizing the fastest. However, the rapid urbanization of that continent should not mask the existence of large rural areas that may be less receptive to socioeconomic change.

Today, large proportions of people of developing countries who live in big cities live in slums (this is the case, for instance, of more than half the population of Mumbai, India; see Bapat and Agarwal 2003: 72), and most of these slums do not have clean water and sanitation. Large numbers of people also live in urban corridors linking two or more towns (peri-urban areas). Internal migration occurs not only from rural to urban areas, but also from small to bigger cities. Inevitably, the challenge of ever growing cities will force public authorities to design policies aimed at inclusive urbanization.

[11] An urban area can have a population of 5,000 or less people.

[12] See http://esa.un.org/unpd/wup/index.htm, accessed on November 7, 2010.

Demographic and Epidemiological Transitions

As mentioned, the current demographic landscape of the world is the result of the demographic transition. It is a transformation process that started in Britain and France at the beginning of the eighteenth century. The process then spread to the rest of Europe and the territories of European settlement, and then to the other regions of the world (Chesnais 1992: 221–283; Dyson 2010: 8–49; Lee 2003: 167–190).

The demographic transition is defined as the change from a traditional demographic regime with a high quasi-equilibrium (i.e., high mortality and high fertility), to a modern demographic regime with a low quasi-equilibrium (i.e., low mortality and low fertility; see Fig. 2.1). This process is usually accompanied by profound socioeconomic transformations as well as a shift from a rural to an urban lifestyle. The first important change is the decline of mortality, which generally occurs because of improvements in survival conditions, especially during early childhood (Stage 2). This, in turn, triggers a sharp increase of the population as more people survive. Then, the onset of fertility decline marks the next phase of the demographic transition (Stage 3). This phase is still underway in some developing countries and in most of the least developed countries. In several countries, the completion of the demographic transition is also affected by the HIV/AIDS epidemic. The final stage of the demographic transition is completed when fertility and mortality reach a new and low quasi-equilibrium (Stage 4).

The demographic transition is completed when the population growth rate stabilizes at its pre-transitional level (Chesnais 1992: 27–28). At the end of the process, the population finds itself multiplied by the *transitional multiplier*, which is determined by the duration of the transition (Chesnais 1979a: 1141–1143). This factor standardizes the transition process according to the size of the population at the beginning and the end of the process. In principle, the longer the lag between the fall of death rates and the decline of birth rates, the higher the transitional multiplier. France saw its population double (transitional multiplier of two) because birth rates and death rates decreased together slowly over a period of two centuries. Kenya, on the contrary, and discounting the potential impact of the HIV/AIDS epidemic, could have a transitional multiplier of 20, ten times higher than France (Chesnais 1990: 336). Kenya had already seen its population multiplied by 6 between 1948 and 2000 (Chesnais 1979b: 207).

However, some countries, particularly in Western Europe, have experienced what some specialists have called a *second* demographic transition, defined by a further decrease in fertility levels caused by a decline of marriage and the rise of new family forms, triggered by changes in values (Van de Kaa 2003: 873–874). These countries have reached a post-transitional stage, as their low fertility levels do not ensure the replacement of generations. Their populations are also affected by population aging.

More recently, some researchers have pointed to a possible *third* demographic transition, especially in Europe and the US. This process is defined by forthcoming

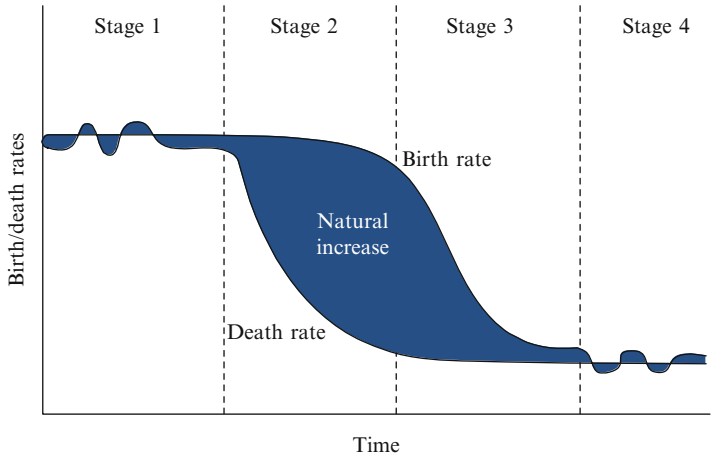


Fig. 2.1 Stages of the demographic transition
Note: Natural increase is produced from the excess of births over deaths
(Source: Population Reference Bureau 2006)

ethnic and social transformations of the ancestry of receiving populations, which are brought about by "high levels of immigration of persons from remote geographic origins or with distinctive ethnic and racial ancestry" (Coleman 2006: 401).

The theory of the demographic transition or "demographic revolution" was first proposed by a Frenchman, Adolphe Landry (1874–1956), in his seminal *La révolution démographique* published in 1934 (Landry 1934/1982). The theory was thereafter reformulated between 1945 and 1953 by the American demographer Frank W. Notestein (1902–1983). Work by Warren Thompson (1887–1973) and Kingsley Davis (1908–1997) also contributed to the intellectual foundations of the theory. Overall, the demographic transition theory (perhaps the most dominant theory in demography) is an attempt at a comprehensive, even universal, description of demographic change. The theory also has a practical and operational dimension, inasmuch as it can help design policy interventions and/or define assumptions to calculate demographic projections.

Since the demographic transition theory was first formulated, it has become apparent – and now widely accepted – that there is no single template that would allow to describe the demographic transition everywhere. On the contrary, there are numerous and varied situations: the principle is universal, but its applications are diverse. With the European Project on Fertility (or the Princeton Project), which systematically studied fertility in 700 European provinces, the theory of the demographic transition has sometimes been narrowed to a theory of fertility, precisely because of the difficulties of elaborating a unique transition template (Coale and Watkins 1986). Another difficulty is to identify the factors that explain the decline of mortality and, more importantly, fertility levels. The Princeton Project has also challenged the initial perception that demographic phenomena are closely linked to socioeconomic factors (Hirschman 2003: 425–431).

The American demographer Ansley J. Coale (1917–2002) has stressed the importance of cultural factors on demographic outcomes and identified three universal prerequisites for a sustained decline in fertility. In his famous formulation, "fertility must be within the calculus of conscious choice" for individuals and couples as opposed to fate or chance or divine will. Second, "reduced fertility must be advantageous". Third "effective techniques of fertility reduction must be available" (Coale 1973: 65). This has been sometimes summarized as "ready, willing, and able" (Hirschman 2003: 428).[13] One should not discount the overall social and economic modernization of societies going through the various stages of the demographic transition. Female education[14] and empowerment, gender equity, and mass media (Westoff and Rodriguez 1995: 26–36) also play an important role.

The importance of the cultural factors has been recently reframed through the concept of *ideational change* (cultural values are the primary influence on fertility; see Cleland and Wilson 1987). The concept of ideational change posits that fertility can drop considerably, even in very poor environments, because of changes in perceptions and attitudes. These transformations are caused, among other things, by the diffusion of new ideas. More than a century ago, the French anthropologist Arsène Dumont (1849–1902) had hypothesized in his *Dépopulation et civilisation*, published in 1890, that "social capillarity" (the desire to climb the social ladder) could also trigger substantial declines in fertility (Dumont 1890/1990: 72–91).

Unfortunately, it is difficult to identify the elements that initiate the demographic transition process, and especially fertility decline. Knowledge of these factors, however, would be useful to replicate the conditions needed to bring about and/or accelerate the demographic transition, through programs centered on key variables. Could the demographic transition theory have a predictive value? Due to the multiplicity of the transition's modalities, the subject is controversial, even if the universality of the process is no longer seriously disputed. Be it slow or fast, with a small or a substantial demographic growth, the demographic transition appears to be inevitable. It is even a prerequisite to a country's entry into modernity. Therefore, despite the lack of a single pattern with a robust predictive value and the still uncertain knowledge surrounding the decisive factors that cause the declines in mortality and especially fertility levels, the demographic transition theory remains an indispensable framework to understand demographic changes.

The changes brought about by the demographic transition are accompanied by important modifications in the mortality and morbidity patterns. These have been called the *epidemiological transition*, defined by a shift in the disease and cause-of-death patterns occurring along with the overall decline of death rates. Malnutrition and infectious diseases, namely communicable diseases such as respiratory infections, diarrhea, and malaria that often occur during early childhood, are replaced

[13] These preconditions do not consider the case of fertility transitions imposed or at least accelerated through authoritarian means, as in China.

[14] Improving levels of female education helps decrease infant and child mortality faster than rising income.

by non-communicable diseases (NCDs), also called chronic diseases (i.e., heart and cardio-vascular conditions, malignant tumors, degenerative diseases, and diabetes caused by over-nutrition) (Robine 2003: 307). NCDs affect older subjects, last longer, and are more expensive to treat, which explains the escalating cost of health care in developed countries. Other concurrent changes also take place in the population health during the epidemiological transition. These are a function of the true health status of the population[15] and, as mentioned earlier, the rapid emergence of old (65+) and very old (80+) groups within the population.

The discovery of antibiotics and their massive distribution since the beginning of the 1950s has boosted the epidemiological transition. Other techniques such as oral rehydration therapy (ORT), introduced in Bangladesh in the 1970s, have also accelerated the process. Communicable diseases account for two-thirds of all deaths in Africa, but for less than 10% in Europe. In both cases, this has implications for the mobilization of health investments needed either to mitigate communicable diseases and/or to deal with economic consequences of NCDs (Campbell White et al. 2006: 27). Some developing countries, such as Sri Lanka, that went through rapid demographic and epidemiological transitions are actually confronted with both problems because their population is aging rapidly. Finally, the HIV/AIDS epidemic will also have an impact on the demographic and epidemiological transitions.

Focus: The HIV/AIDS Epidemic

The HIV/AIDS epidemic, which probably started at the end of the 1970s, was first reported at the beginning of the 1980s in the US and sub-Saharan Africa. For the latter region, it was the discovery of HIV infections among African patients in Western Europe that provided the evidence of an ongoing epidemic in their continent of origin. During the 1990s, the epidemic spread to Asia (in parts of India and China), Brazil, and Eastern Europe. Today, the regions and/or countries most heavily affected by HIV are sub-Saharan Africa (particularly Southern Africa), Russia, Ukraine, several countries in the Caribbean and Central America, and pockets of India and China (Barnett and Whiteside 2002: 9–16; Engel 2006).

Today, an estimated 33.4m people are infected with HIV (UNAIDS 2009: 7), and three-quarters live in sub-Saharan Africa. More than 25m have already died since the beginning of the epidemic and 15m children have been orphaned (defined as children less

[15]In its 1993 World Development Report (WDR), the World Bank proposed the concept of Disability-Adjusted Life Years (DALYs) in order to assess in a single metric the contribution of diseases and injuries to premature death and ill-health or disability. DALYs combine the number of years of life lost due to death before the normal life span and the number of years lived with a disability, weighted by the severity of the latter. This new "burden of disease" approach has enabled policymakers to quantify health policy options, although it does not capture well premature deaths and disabilities linked to reproductive health outcomes. The weaknesses of this indicator are in part conceptual as it does not reflect gender inequity and in part technical as one may question the adequacy of its components. Additionally, the DALYs do not take contextual variables into account even though it is widely acknowledged that the social, economic, and environmental context significantly influence health outcomes, and this is especially relevant for (women's) reproductive health; see Lopez (2003) (see also footnote 10 in Chap. 9).

than 15 years of age having lost either their mother or both their biological parents). Women are especially vulnerable to the virus and are most often ostracized when they become infected, because of their poor socioeconomic status in numerous societies (Ashford 2006).

It is now established that HIV/AIDS has brought down life expectancy at birth in several countries in sub-Saharan Africa, even if the deterioration of socioeconomic conditions also probably played a part. The hard-won longevity gains since the end of World War II and the decolonization have sometimes been reversed. In the case of Botswana, life expectancy at birth (for both sexes) was less than 45 in 1955, reached 60 in 1990, but is now only 55 years (Population Reference Bureau 2010b). Adult mortality in particular has increased: in Lusaka, capital of Zambia, the risk of dying between the ages of 15 and 60 is estimated at around 80%. The age structure of the population will also be impacted as more young adults are infected and will eventually die. However, it appears that the HIV/AIDS epidemic will not lead to an overall depopulation (Cleland and Sinding 2005), although natural population increase grounded to a halt for a period of a few years in some of the most affected countries in Southern Africa. The consequences of the HIV/AIDS epidemic also affect fertility, as HIV-positive women may want to have more children, but are less likely to carry a pregnancy to term because of a higher occurrence of spontaneous abortions. Overall, this could perhaps reduce fertility levels by 10%, but fertility levels are still high in sub-Saharan Africa. The HIV/AIDS epidemic could stop and perhaps reverse the demographic transition in some countries, which could then be tempted to abandon their efforts to reduce high levels of fertility.

Beyond purely demographic considerations, the economic and psycho-social consequences of the epidemic are enormous. Not only could the qualified workforce be reduced, but the number of AIDS orphans and the disadvantageous dependency of sick people upon active adults could strain households and economy in some countries. This problem will be worsened by the need to mobilize resources to fight the epidemic, through prevention, therapies for the people infected, and mitigation measures for the people infected and affected. Developing countries, which already find it difficult to finance their health system, are severely hit. Overall, the HIV/AIDS epidemic has brought havoc to many countries, affecting demographic and morbidity patterns, as well as destroying the socioeconomic fabric of the communities. The epidemic has also exacerbated gender inequities since women are disproportionally infected. In sum, HIV/AIDS is much more than a disease; it has become a global development issue.

Despite the global pandemic of HIV/AIDS, life expectancies at birth (both sexes) are projected to increase significantly over the next decades (see Table 2.3). The global life expectancy at birth, which was estimated at 46.6 years in 1950–1955, has risen to 67.6 years in 2005–2010, and is projected to reach 75.5 years in 2045–2050 (Medium variant; see United Nations 2009d: 48). Improvements in mortality conditions have been observed and are projected everywhere. The increase will be more important in developing countries. However, in the least developed countries, life expectancy at birth (both sexes) was estimated to be 55.9 years in 2005–2010 and is projected to reach 68.5 years in 2045–2050 (United Nations 2009d: 54).

Of course, these life expectancy projections are predicated on the successful implementation of HIV/AIDS prevention and treatment programs, as well as significant behavior change in the highly-affected countries and regions. Despite successes in the fight against HIV/AIDS, countries in Southern Africa are paying a heavy toll to the epidemic: their life expectancy has fallen from 61 to 53 years since 1990. Since the early 1990s, mortality levels in Eastern Europe have been increasing as well. Russia and Ukraine are most affected, a situation which is also partly explained by the HIV/AIDS epidemic (United Nations 2009d: 14–19).

Table 2.3 Life expectancy at birth (both sexes combined) for the world, major development groups, and major areas, years 2005–2010 and projected for 2045–2050 (2008 UN Medium variant)

Major area	2005–2010	2045–2050
World	67.6	75.5
More developed regions	77.1	82.8
Less developed regions	65.6	74.3
Least developed countries	55.9	68.5
Africa	54.1	67.4
Asia	67.9	76.8
Europe	75.1	81.5
Latin America and the Caribbean	73.4	79.8
Northern America	79.3	83.5
Oceania	76.4	82.1

Source: United Nations (2009d: 13)

High, Medium, and Low Fertility Countries

Although improving mortality conditions contribute to population growth and population aging (since more people live longer), high fertility is the main engine of population growth. Conversely, very low fertility (i.e., fertility below replacement-level[16]) is the main cause of population contraction and depopulation.

As can be seen from Table 2.4, most regions of the world are already well advanced into their fertility transition. Almost half of the world population currently experiences replacement-level or below replacement-level fertility. In some countries (e.g., China), these results were obtained through coercive policies.

Again, the gap between the developed and developing regions is striking: in 2000–2005, the latter had fertility levels almost twice as high as the former (i.e., 2.9 and 1.6 children per woman, respectively). Fertility levels of the LDCs were 4.8 children per woman for the same period. Africa remains an outlier: for the same period, its fertility levels were 4.9 children per woman. Fertility levels in sub-Saharan Africa are even higher and were estimated at 5.4 in 2000–2005 (United Nations 2009d: 50, 52, 54, 60 & 62).

[16]Replacement level fertility is set at 2.1 children per woman. The rationale for this figure is that a woman needs to replace herself with a girl that in turn will reach the mean age at childbearing. Since usually 105 boys are born for every 100 girls (sex ratio at birth), a woman needs (105 + 100)/100 = 205/100 = 2.05 children in order to have at least one girl. Then, because about two girls would die before reaching the mean age at childbearing [these are the mortality conditions of the developed countries], one needs to add to 2.05 the value of .02 multiplied by 2 = .04 (because there are two sexes). Finally, 2.05 plus .04 yields 2.09, rounded up to 2.1. It should be noted that when mortality conditions are less favorable, replacement-level fertility might be significantly higher, sometimes even close to 2.8 children per woman in situations of severe HIV/AIDS epidemics. Conversely, the replacement level fertility could be as low as 2.06 when mortality conditions are even more favorable.

Table 2.4 Total fertility rates for the world, major development groups, and major areas, years 1970–1975 and 2005–2010, and projected for 2045–2050 (2008 UN Medium variant)

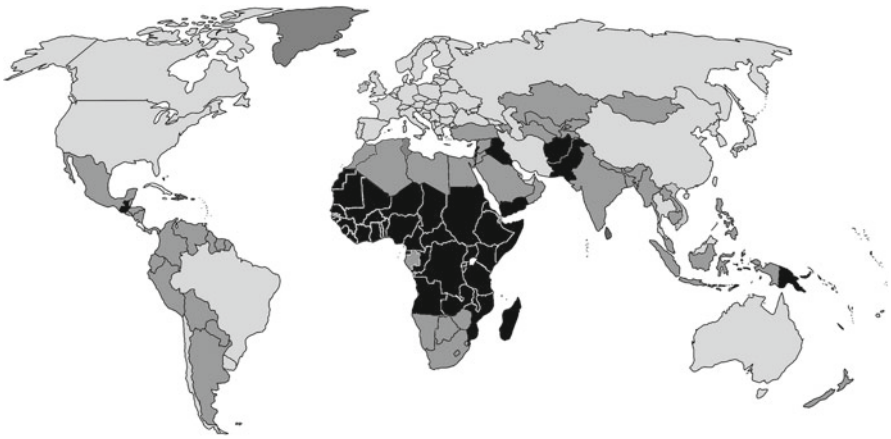
	Total fertility (number of children per woman)		
Major area	1970–1975	2005–2010	2045–2050
World	4.32	2.56	2.02
More developed regions	2.17	1.64	1.80
Less developed regions	5.18	2.73	2.05
Least developed countries	6.74	4.39	2.41
Africa	6.69	4.61	2.40
Asia	4.76	2.35	1.90
Europe	2.19	1.50	1.80
Latin America and the Caribbean	5.01	2.26	1.82
Northern America	2.07	2.04	1.85
Oceania	3.29	2.44	1.98

Source: United Nations (2009d: 10)

The United Nations population projections (Medium variant) assume that fertility will decrease everywhere over the next 40 years, but more slowly in Africa. These projections assume that fertility would eventually stabilize slightly below replacement level in most regions by 2045–2050, and a few decades later in Africa (an ultimate global average total fertility rate or TFR of 2.02 children per woman has been assumed).

As far as their fertility levels are concerned, the various countries around the world can be categorized into three major groups (see Map 2.3). First, one finds high fertility countries (defined by fertility levels above 4.0 children per woman).[17] This group represents 16% of the world population. It comprises four of the 18 big countries: Democratic Republic of the Congo (Romaniuk 2011: 5), Ethiopia, Nigeria, and Pakistan. The group encompasses most of sub-Saharan Africa (with the exception of Southern Africa), several countries of the Arab-Muslim world, and a few isolated countries elsewhere, most notably Afghanistan, the Palestinian Territory, Timor-Leste, and Yemen. In 2010, sub-Saharan Africa accounted for 12.5% of the world population, but almost 25% of all births in the world. The delay of the demographic transition in Africa will have an impact on the socioeconomic development prospects of these countries (Alexandratos 2005). The lag in the demographic transition of Africa will also determine when the world population will reach its peak, before it starts to decline because of generalized low levels of fertility.

[17]Calculations presented here are based on a simple tally of countries' populations according to their TFRs, as estimated in mid-2010; see Population Reference Bureau (2010a). Another method is to work with the net reproduction rate, i.e., a measure of whether women have "enough children to ensure that, on average, each woman is replaced by a daughter who survives to the age of procreation". This method is used by the UN Population Division, and yields slightly different results; see http://esa.un.org/unpd/wpp/Other-Information/Press_Release_WPP2010.pdf, accessed on August 3, 2011.



Map 2.3 Fertility levels across the world
(Note: light areas indicate low fertility, darker areas, medium fertility, and darkest areas, high fertility)

A second group of countries have fertility levels between replacement level (TFR of 2.1) and four children per woman. This intermediate group of countries comprises 38% of the world population. These 80 countries or so are large and diverse, but they are all further along in their demographic transition, as they already experience important declines of their fertility levels. Seven of the 18 big countries are in that group: Bangladesh, Egypt, India, Indonesia, Mexico, the Philippines, and Turkey. Medium-sized countries, like Colombia and Myanmar (TFR of 2.4 in 2010), and many smaller countries make up the rest. These countries will still experience rapid population growth, which is linked to the population momentum (i.e., increase of the population that is driven by the young age-structure). They are still affected by the phenomenon of the youth bulge, usually defined as a high proportion (40% or more) of the population 15–29 years old to the adult population above age 15.[18] These young people will need special policies and programs to help them through their five life transitions, namely learning after primary school age, starting a productive working life, adopting a healthful lifestyle, forming a family, and exercising citizenship (World Bank 2006c: 5–10).

The mixed nature of this group of countries is not only the result of their diverse demographic sizes, but also of the various attitudes of their public authorities with regard to population issues and the existence (or absence) of population policies and programs. The example of India, which will be discussed further in Chaps. 4 and 5, is especially interesting. India was a forerunner in the field of family

[18]For instance, the Egyptian population aged 15–29 represented 43% of the 15+ age group in 2010 (UN 2008 Population projections, Medium variant); see http://esa.un.org/unpp/p2k0data.asp, accessed on February 15, 2011.

planning programs, but then relaxed its efforts and the decrease in fertility levels has lagged in its most populated states (the "Hindi-belt"). In most of Francophone sub-Saharan Africa and Haiti, the political will to organize effective family planning programs has been woefully missing. Additionally, some countries may encounter logistical difficulties in organizing efficient population programs as in the situation of Nepal.

Finally, a third group of countries has reached replacement-level fertility or has even lower fertility. This group also comprises seven of the 18 big countries: Brazil, China, Iran, Japan, Russia, US, and Vietnam. These countries encompass 46% of the world population. Some developed countries are well below replacement-level, such as Canada (1.7 children per woman, whereas the TFR is 2.0 in the US); this applies also to most of Europe and in particular Eastern Europe, and parts of Asia (South Korea and Eastern China, including Hong Kong and Taiwan). These countries or regions must deal with post-transitional imbalances and are facing three major issues: sub-fertility, population aging, and immigration. They also face the risk of depopulation as they enter a stage of "permanent disequilibrium" (Chesnais 2001: 255). Their overall demographic weight will trigger the decline of the world population, after it reaches its peak in absolute numbers.

Future Demographic Growth and Changing Age Structures

As mentioned, the world population was estimated at 6.9bn people in mid-2010 and is expected to reach at least 9.15bn in 2050, although the final figure will depend on what happens over the next decades in the LDCs (Medium variant of the 2008 United Nations' population projections; see United Nations 2009d: 48).[19] According to the same Medium variant, the world annual population growth will decrease further, in absolute numbers, to 67.3m per year in 2020–2025 and fall even more rapidly afterwards, reaching 30.7m per year in 2045–2050 (United Nations 2009d: 48). It should be stressed that these population projections assume that fertility would eventually reach the level of 2.02 children per woman on average, which is probably an unrealistic assumption for some regions. Furthermore, these projections assume the absence of catastrophic events, such as nuclear wars, severe viral pandemics, major climate changes, large-scale natural disasters, and other unexpected disasters (Smil 2005a: 201–236; see also Smil 2008).

As shown in Table 2.1, most of the population growth during the next four decades will take place in developing regions. The Population Reference Bureau

[19]The Population Reference Bureau gives a world population of 9.49bn for 2050, an estimate that is 3.5% higher than the 2008 UN Medium variant. The difference is explained by higher projection estimates for China, India, Indonesia, sub-Saharan Africa, and the US (Carl Haub, personal communication, November 10, 2010); see Population Reference Bureau (2010a).

(PRB) has calculated an indicator "2050 Population as a Multiple of 2010" (either positive or negative), by which the populations of the various regions or world groupings could increase or decrease (Population Reference Bureau 2010a). This growth factor for the developing countries is 1.4 between 2010 and 2050, which means that the population of this group will grow by 40% over the next 40 years. By contrast, population growth will almost be negligible in the developed countries (7% only, growth factor rounded off at 1.1). Almost 97% of the global demographic growth projected until 2050 will occur in developing countries. The least developed countries will see their population double between 2010 and 2050 (growth factor of 2.0). Moreover, two other facts need closer attention. First, a huge demographic increase is projected in Africa and particularly sub-Saharan Africa, as their populations will more than double over the next 40 years (growth factor of 2.1 and even higher for three out of four sub-Saharan regions: Western, Eastern, and Middle Africa). The second striking fact, as already mentioned, is that Europe is the only region in the world where population will shrink between 2010 and 2050. Inevitably, both situations of rapidly expanding or contracting populations, which will be occurring simultaneously, will call for renewed and challenging policy interventions.

For the world as a whole, the median age (the age which separates the population in two halves) was 24 years in 1950, 27.9 years in 2005, and will be 38.4 years in 2050, according to the Medium variant of the 2008 United Nations' population projections. Likewise, the proportion of people over age 65 has increased from 5.2% in 1950 to 7.3% in 2005, and will increase again to 16.2% in 2050 (Medium variant). The proportion of people older than 80 years (hyper-aging) will shift from 0.6% in 1950 to an estimated 4.3% in 2050 (Medium variant; see United Nations 2009d: 48).

The dependency ratio (i.e., the number of dependent per working age adult) will change as well, and the labor force will increase, with a lag, after the decrease of fertility levels. This phenomenon, which was documented for Asia, has led to the identification of a demographic dividend (Birdsall et al. 2001; see Chap. 3, *Focus: The Asian Demographic Dividends*). At the beginning of the demographic dividend "window", countries may also experience a youth bulge.

Between 2010 and 2050, the populations of the individual 240 countries and geopolitical entities of the world will also continue to grow or to shrink, depending on their current rate of demographic growth, the increase in their life expectancies at birth, the different paces of their fertility declines, their age structures and the related phenomenon of the population momentum (either positive or negative), and finally their migratory trends.

In this respect, the PRB growth factor yields some sobering results on both the high and the low ends of the spectrum. Niger has the highest indicator, as its population will be multiplied by a factor of 3.7 between 2010 and 2050. Conversely, Japan could have in 2050 a population that would amount to only 70% of that in 2010 (indicator of 0.7) (Population Reference Bureau 2010a). The point about Africa's rapid demographic growth is even more compelling when one looks at countries with 40m or more people in 2050: their number will be 31 (excluding the potential

20 big countries), instead of 15 in 2010 (excluding the current 18 big countries).[20] In fact, three-quarters of the new medium-size countries in 2050 will be in Africa and the Arab-Muslim regions.

The age structure of the populations of the world will also change. During the demographic transition, the initial triangular population pyramid as illustrated by the case of Niger will become rectangular over time, as fertility gradually falls to replacement levels (see Fig. 2.2). This is shown by the age structure of the US, which is also affected by immigration and relatively high levels of fertility sustained by a younger population as compared to most developed countries. But a continuing decline in fertility can then lead to an *inverted* pyramid as in South Korea. With very few elderly and relatively few children, the top and bottom of the age structure are small in proportion to the total population, providing a bulge in the labor force age group. This generates the potential for a demographic dividend (see Chap. 3, *Focus: The Asian Demographic Dividends*).

The *transitional age multiplier* (Chesnais 1990) enables a better understanding of this population aging phenomenon. Population aging is defined as the increase in the percentage in the population of people aged 65+ (a population is considered relatively old when the proportion of the people over age 65 is comprised between 8% and 10%[21]; see Gavrilov and Heuveline 2003: 32). The transitional age multiplier index compares the size of the different age groups at the beginning and the end of the demographic transition. This analysis demonstrates the speed of population aging in the event of a fast demographic transition. Again, in the case of Kenya, the elderly age group (people 65+) would be multiplied by a whopping 200, whereas the Kenyan population as a whole would already be multiplied by 20 (this does not take into account the potential effect of the HIV/AIDS epidemic). The impact of the demographic transition on a population is thus not only one of scale, by which the population increases in size, but it is also one of structure, as both the population's age distribution and labor force composition are modified (Chesnais 1979a).

This future population growth, positive or negative, will to a very large extent hinge on fertility levels. In 2010, the TFR is still far above replacement level in developing countries (aggregate TFR of 2.7), but well below replacement level in developed countries (aggregate TFR of 1.7). Nevertheless, the demographic future of the planet appears by and large to be already defined, since most of the 18 big countries and the next 15 major countries are well into their fertility transition, with the major exception of sub-Saharan African countries.

However, whether the ending level of fertility will eventually be above or below replacement (i.e., TFR of 2.51 and 1.54 for the High and Low variants, respectively,

[20] Again, population projections need to be taken with caution as they depend heavily on the assumptions used. Occasionally, projections for a country may vary from one UN revision to the next because assumptions have been modified.

[21] The "olds" are those aged 65+, and the "oldest olds" are those aged 80+. The expansion of these groups is sometimes referred to as population aging and hyper-aging, respectively. Some authors also propose: old (65–74), old old (75–84), and older old (85+).

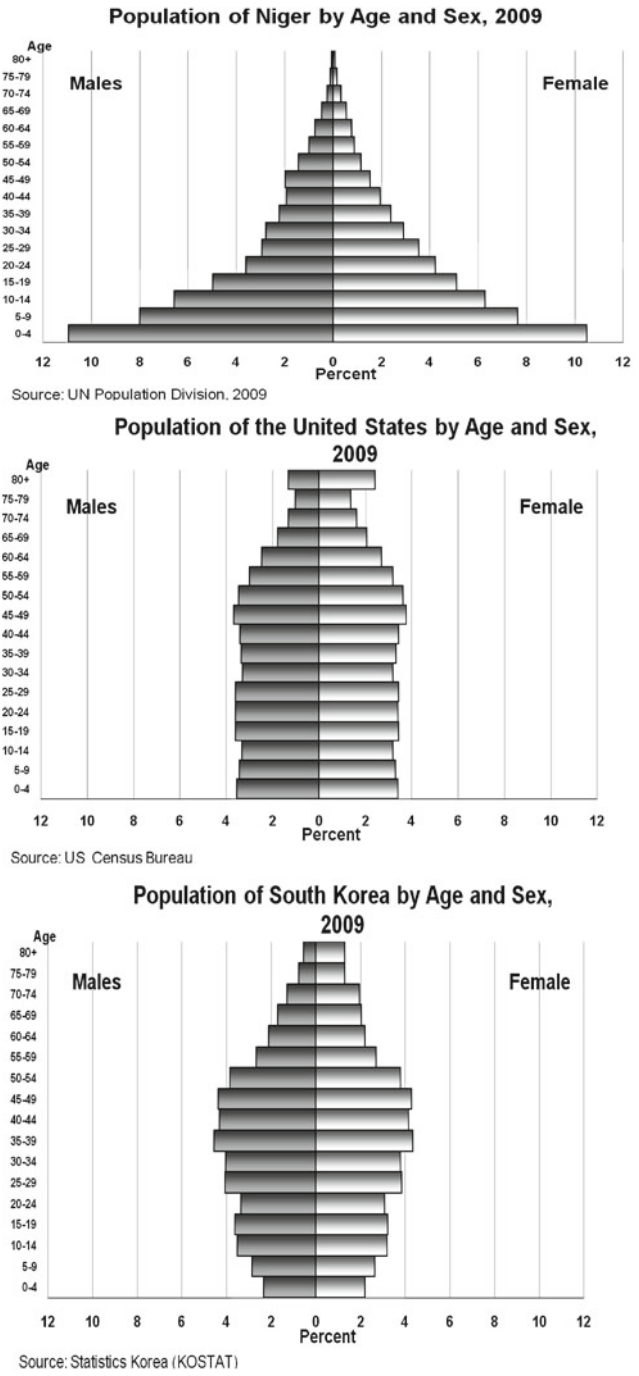


Fig. 2.2 Population pyramids of Niger, the US, and South Korea

of the 2008 UN population projections) may have profound consequences for the future size of countries' populations. Current population projections for some big countries (e.g., India[22]), are predicated on rather optimistic assumptions of fertility declines. In fact projections for India done at sub-national level, with different levels of fertility and various demographic weights of states, would yield very different national results when added up (see Chap. 5, *Focus: Could India's Population Reach Two Billion People?*). Similar conclusions could be reached for, say, Nigeria, where fertility is declining at a slower pace in the North than in the South.

In addition, the young age structures, caused by previously high levels of fertility, will also affect the future demographic growth through the mechanism of population momentum (i.e., the growth induced by the age structure) (Feeney 2003: 648). For instance, the total number of new births may stay high because many young people are in the marrying age bracket, even if the TFR decreases to reach replacement level. This explains why the Chinese population will continue to expand, despite already experiencing below replacement fertility. Finally, increases in life expectancy will also contribute to the growth of the world's population (we do not know the limits to the life-span). Overall, as fertility is the major engine of population growth, either positive or negative, fertility policies, or the lack thereof, will play a crucial role.

Finally, a new area of research has emerged in demography, which attempts to analyze age-structure transitions. The purpose is to explore the age waves or echoes produced by rapidly changing fertility regimes. These age waves are calling for policy responses as well, because they "create shifting flows of people into the key age groups, greatly complicating the task of managing the many components of development" (Tuljapurkar et al. 2005: vii). Another important issue that has not received full attention yet is the inversion of the population pyramid and its consequences, as it triggers negative population momentum and eventually depopulation (Chesnais 2001, 2002).

The Rise of International Migration

The demographic transition is also accompanied by another phenomenon: the emergence of large migratory movements, referred to as the *migration transition* (Chesnais 1992: 153–189). Historically, when countries move into the later stages of their demographic transition, they stop sending emigrants and often start receiving immigrants. Several European countries, which were previously countries of emigration, have now become net receivers of immigrants, who partly compensate for their labor force deficits. Therefore, the expansion and contraction of the population during the demographic transition process have triggered waves of emigrants and immigrants, respectively.

[22] As mentioned, India's population is expected to be larger than China's by about 2030.

International migration flows, which are monitored globally by the UN Population Division, have accelerated since the end of World War II. In 1990, there were a total of 120m international migrants, while in 1975 there were only 75m. In 2006, an estimated 191m people (as assessed in 2005), i.e., 3% of the world population, were living in a country other than the country of their birth.[23] Today, the number of international migrants is higher than it has ever been (Martin and Zürcher 2008: 3; UNDP 2009: 26).

International migration is part of the globalization of the world economy and is shaping economies and societies. The causes of migration are generally categorized as push and pull factors. The *push factors* are those that encourage people to leave their country of birth. They include, but are not limited to, the lack of economic opportunities and the poor quality of life. The *pull factors*, on the contrary, such as the availability of jobs and a greater quality of life, attract potential migrants to the countries of destination.

Often, push and pull factors work in synergy to determine migration trends between sending and receiving countries. To the push and pull factors, some authors have added the *network factor*, namely the fact that candidates for emigration can rely more and more on relatives and friends in countries of destination (Martin and Widgren 2002: 6–9). Finally, other factors have played an important role in migratory movements as well, such as the links with former colonial powers, the commonality of language between sending and receiving countries, and the transportation and communication revolutions.

Economic drivers are a major component of internal and international migration. The desire to improve living conditions is the most evident reason for which people migrate, as three-quarters of international migrants move to a country with higher living standards than their own[24] (UNDP 2009: 22). Better economic prospects can *pull* migrants internally, from rural to urban areas, or internationally, while insufficient employment options, a weak economic outlook, and sometimes desperation tend to *push* emigrants. Long-distance migration pertains more often to highly educated people, except in the case of refugees and asylum seekers.

Martin and Widgren (2002: 8) categorize migrants in two types, economic and non-economic, along with the three main determinants of migration, as shown in Table 2.5.

A neo-classical model of migration, the Harris-Toredo model,[25] attempts to represent human movements based on the economic assumption that migrants operate as rational income-maximizing agents. However, this model is quite simplistic.

[23] The increase of geopolitical entities since the end of World War II and the break-up of the Soviet Empire has, at least in part, inflated these numbers artificially.

[24] The United Nations Human Development Report 2009 uses the Human Development Index (HDI) as a measurement of this, as it encompasses income, literacy, and life expectancy.

[25] Although this model attempts to capture internal movements within developing countries, it has widely been applied to international migration.

Table 2.5 Main determinants of migration

	Factors encouraging an individual to migrate		
Type of migrant	Demand – Pull	Supply – Push	Network/other
Economic	Labor recruitment; better wages	Un- or under-employment; low wages	Job and wage information flows
Non-economic	Family unification	War and persecution	Communications; transportation; assistance organizations; desire for new experience

Source: Martin and Widgren (2002: 8)

It fails to embody important migration issues, such as the difficulty to cross state borders and/or the complex administrative processes of immigration. Further, the diversity among migrants and their very diverse experiences make it difficult to accurately generalize categories of migrants (Castles 2006: 7). Non-economic drivers of migration often overlap with economic ones. A migrant can fit in more than one category at a given time, move from one category to another, or even fall through the fault lines (e.g., human trafficking). According to Castles, migration implies to a large extent "mixed motivations", meaning that people tend to migrate for economic and non-economic reasons simultaneously, whether they are personal, political, or persecution-based (Castles 2007: 6).

Typically, rapidly growing populations have been a major driver of emigration. When analyzing migration trends in five major emigration countries (i.e., India, the Philippines, Morocco, Mexico, and Turkey), Castles argues that a common and significant characteristic is the recent demographic transition. The rapidly decreasing mortality rates, followed by increasing life expectancy and faster population growth, resulted in many young people entering the workforce. In cases where the local economy could not support the increase, there has been marked emigration (the "migratory transition"). Significant emigration from a country generally takes place where economic modernization and social transformation are already underway[26] (Castles 2007: 13). Although studies show that benefits from migration are higher among migrants from countries with low human development, emigration is higher in countries with moderate levels of development (Castles 2007: 2). In fact, and this is rather counter-intuitive, poverty is a fundamental constraint for migration (UNDP 2009: 25).

[26]The theory of migration transitions was originally formulated by Wilbur Zelinsky in 1971. It posits that industrialisation and modernisation often lead to emigration as a result of rapid population growth, low rural employment levels, and low wages; see Castles (2007: 13).

Along with demography and economics, politics is also considered a main driver of migration (Castles 2007: 2). Political instability, persecution, wars, and conflicts are generally underlying causes of political migration, often understood as "forced migration". Forced migrants, like other categories of migrants, are not a homogenous group, but the term generally refers to refugees and asylum seekers. Unlike any other international migrant, refugees are protected and have unique status under international law.[27] However, asylum seekers face daunting challenges when trying to settle in another country and there has been increasing repatriation of refugees to developing countries (United Nations 2006a: 4). In many developed countries, including France, Australia, or the US, many asylum seekers are detained upon arrival, for repatriation or while their applications are being considered.

The most significant portion of international migrants is made of those moving from less to more developed countries, estimated at 62m in 2005. Yet this flow represents only 37% of total international migration, as most migration takes place regionally, and South-South migration is almost as significant as South-North migration (Martin and Zürcher 2008: 3; UNDP 2009: 21). The major destination countries include the US, Australia, Canada, the United Kingdom, and Germany (United Nations 2006a: 2). A particular feature of migration over the past 60 years is that while the share of migrants in relation to world population has remained comparable, the share of migrants from less to more developed countries has doubled, reaching 12% in 2010 (UNDP 2009: 31). It ranged from an increase of approximately 15–25% in Australia, to 25–80% in Canada (UNDP 2009: 32).

Countries are generally poorly equipped to tackle the challenges of immigration. They remain organized on the basis of seventeenth century concepts of mutually exclusive territorially bound sovereignties (the "nation-state" system of the 1648 Treaty of Westphalia), which assume fixed populations of "subjects" that "belong to these sovereigns". Human beings are now responding to modern incentives and material conditions (e.g., communications and transports) that provide unprecedented information regarding opportunities in different locations and greatly facilitate movements (Zolberg 2006b: 222–253).

For many developed countries, and this is especially visible in Western Europe, temporary or longer-term migration is effectively seen as a means to meet domestic labor needs (Castles 2006: 7). However, whether it is an effective means is still debated and this is without accounting for the "brain drain"[28] affecting the developing countries from which come many immigrants. In addition, the migration of young

[27]The channels through which asylum seekers acquire refugee status are governed by the 1951 Convention Relating to the Status of Refugees.

[28]The "brain drain" refers to the process through which many developing countries lose some of their most skilled laborers, for instance health personnel, as a result of their emigration (opposed to "brain gain").

people and workers to developed countries could in principle make up in part for sub-fertility (Keely 2009: 395–403). In fact, the number of immigrants necessary to obtain the desired results far exceeds the welcoming capacities of host countries. It is very hard to get the exact numbers of migrants needed, which have the specific skills and ages. In receiving countries, the presence of large communities of immigrants, especially in conjunction with high rates of unemployment, can also trigger xenophobia and racism.

Confronted with these problems, Western countries have developed varied solutions. They range from the French Republican integration system, in which the dominant cultural model must be accepted in order to integrate, to the recently discredited model of multiculturalism, where societies accept their multi-ethnic natures (as in Canada, Great-Britain, and the Netherlands), or even the model of blood identity (*jus sanguinis*) as in Germany until 1999. Anyone of German origin was integrated into the nation-state, while foreigners remained guestworkers or *Gastarbeiter* (Teitelbaum and Winter 1998: 11–30). In all instances, the melting-pot model has shown its limitations, perhaps because thresholds of immigrants are too high with respect to integration capabilities.

Today, there are significant trends of temporary migration in OECD countries, representing a third of arrivals annually (UNDP 2009: 26). These migrants come for a limited stretch of time, return to their countries of origin, and then emigrate once again, a phenomenon also known as "circular migration". In recent policy debates, circular migration has been advanced as a beneficial form of migration for developed countries and for the immigrants' countries of origin (Vertovec 2007: 2). It is believed that temporary migrants can acquire skills and accumulate income in developed countries, which could then be reinvested upon return in their country of origin. Some developing countries have indeed benefited from monetary transfers sent by migrants. Money sent home by migrants worldwide has increased from around USD100bn in 1995 to more than USD250bn in 2005 (World Bank 2006a).

Nonetheless, migration is increasingly challenging and its benefits ever more volatile. Unemployment is growing in key migrant destinations, especially among immigrants (UNDP 2009: 41). Immigrants tend to be hit the hardest by collapsing sectors, they lack safety nets, and the resentful perceptions of migrants make immigrant populations a particularly vulnerable group in developed countries.

Finally, another fundamental issue is that data on international migration remain relatively scarce and institutions needed to address these challenges are woefully inadequate. However, the situation has changed in recent years, with the development of an international migration database at the United Nations Population Division and the creation of several multilateral consultation bodies devoted to international migration issues. This is most timely as policies surrounding international migration will become one of the main topics on the global agenda in coming decades.

Old and New Demographic Issues

In 2010, 16% of the world population still experience high fertility levels. Most high fertility countries are also in the group of LDCs (among the LDCs, Bangladesh is close to reaching replacement level fertility). This is an issue of *expanding* populations (McNeill 1990: 1–21 & 23–48). These countries will need to accelerate their fertility transitions if they want to improve their socioeconomic development prospects (Cleland and Sinding 2005). However, it will be difficult to do so because both gender and socioeconomic conditions of these countries are unfavorable (more favorable gender and socioeconomic conditions have helped trigger fertility transitions in Asia, Latin America, and the Caribbean). Furthermore, in several LDCs, and particularly in sub-Saharan Africa, the leadership has only timidly supported public policies to reduce fertility. In addition, many high fertility countries are also affected by the HIV/AIDS epidemic and they will also need to address this new threat. In particular, HIV prevention and reproductive health services delivery will need to be better coordinated. These countries will also need to address population aging issues since rapid demographic transitions can lead to very rapid aging, as highlighted by the transitional age multiplier indicator. Finally, migration issues will also play a major role in the socioeconomic development of these countries, because many poor countries are affected by "brain drain", although they also benefit from substantial levels of remittances. However, emigration from densely populated countries such as Haiti and Rwanda has created regional imbalances in the Caribbean and the Eastern African Great Lakes region, respectively. Likewise, rapid population growth in sub-Saharan Africa might affect the future of neighboring continents, such as Europe.

Countries that are in the midst of their fertility transitions will need to continue to put efforts and resources into achieving replacement-level fertility outcomes without allowing, if possible, fertility to go below replacement level.[29] These countries will also need to look into the issue of equity, as generally poorer segments of their populations still lack access to health services, including reproductive health and family planning. In addition, several countries, e.g., India, are facing the issue of sex-selection of children facilitated by the availability of cheap ultrasonic devices and implemented through the induced abortion of female fetuses. The resulting skewed sex ratios at birth (as high as 128 boys for 100 girls in some Indian states) might cause severe gender imbalances in the future, unless corrective actions are taken (see Chap. 9, *Focus: "Missing" Girls*).

As mentioned, below replacement fertility currently affects almost half (46%) of the world population, due in part to the large share of China's population

[29] However, some countries, hard-pressed by high population densities and a fragile environment (e.g., Bangladesh), may consider bringing their fertility levels below replacement for some years or even decades in order to stabilize their population earlier. Once the population has been stabilized, the challenge will be to bring fertility back to replacement levels in order to avoid severe population aging and eventually depopulation.

(one-fifth of the world population). This is an issue of *declining* populations (McNeill 1990: 49–71). Two problems can arise and reinforce each other. First, TFRs can drop below replacement level (2.1 children per woman), bringing a birth deficit and jeopardizing the renewal of generations (this is already the case in many developed countries). Second, countries can experience population aging caused by sharp declines in fertility and increases in longevity (increased life expectancies, in particular among older adults). The mean age and the median age will also rise in these populations, although these measures should be adjusted for increases in life expectancies (Lutz et al. 2008b: 716). Population aging puts at risk retirement systems, whether they consist of "pay-as-you-go" schemes or capitalization schemes. However, some authors have argued that societies with below-replacement fertility could still strive economically and socially. Rather than sheer numbers and concerns for generations' replacement, they stress the importance of age structures, regional distribution, and the "quality" dimension, i.e., skills and human resources (Lutz et al. 2004a: 331).

When fertility levels are very low, say, at 1.3 or even 1.2 children per woman, and stay at such levels for a long period, then the main danger is population aging and, eventually, depopulation, which is a contraction of the population size. In addition, such very low levels of fertility may combine with deficient age structures and generate negative population momentum. This is already the case in Russia. It should be noted that a few countries in Asia (e.g., South Korea, Taiwan) have even lower fertility levels. Again, migration movements are linked to the demographic transition and immigration pressures increase when fertility is very low, because the labor force becomes deficient. The consequences of these migratory movements on the ethnic composition can also be significant.

*Focus: Demographic Hotspots and "*Cold Spots*"*

Some countries, regions or cities have too many people in relation to their resources, because their populations are growing too rapidly and/or they receive too many immigrants. They can be called demographic *hotspots*. On the contrary, some other countries, regions or cities do not have enough inhabitants, because of very low fertility levels, poor mortality conditions, and/or heavy emigration. They can be called demographic "cold spots".

Several states or regions experience fast population growth that exacerbates population pressure and weakens their traditional agricultural economy and environment. In these situations, population, agriculture, and the environment may follow a downward spiral of deterioration (Cleaver and Schreiber 1994). This "nexus" may lead some countries or regions into a *Malthusian trap*, defined as the incapacity to ensure a sustainable development without outside help (such as food assistance). This collapse is sometimes aggravated by the failure of entire countries (phenomenon of failed states), which may come under the control of predatory political groups. Ethnic disagreements can further weaken states and trigger violent conflicts (Brown et al. 2000; Kaplan 2000). Religious fundamentalism can also add to the volatility of some situations.

Rwanda is an extreme example of such a process. The highest demographic densities of continental sub-Saharan Africa, a peasant economy that reached the peak of its productivity potential, and the degradation of the environment (May 1995), created a very fragile situation in which political jousting of rival groups eventually degenerated into the genocide of

1994. Although overpopulation was probably not the direct cause of the massacres, it created a climate of crisis (worsened by external interferences), which a spark sufficed to ignite (May 1996). Other countries or regions of sub-Saharan Africa (e.g., the Horn of Africa) and other parts of the world (e.g., Haiti, some states of India), could experience similar difficulties (see Chap. 6, *Focus: Haiti's Ecological Disaster*). In addition, too rapid urbanization may also lead to the spread of unmanageable slums.

On the contrary, other regions of the world experience severe negative population growth and depopulation. This situation is still poorly documented as it has not yet occurred on a large scale. However, Russia offers an example of the combination of demographic and health crises (low fertility and high mortality), which triggered a negative population momentum because the deficient age structure accelerates the decline of fertility (Feshbach 2003). Countries like Germany, Italy, and Japan as well as most countries in Eastern Europe are all confronted with depopulation caused by negative population growth, which is fueled by sustained low fertility and/or heavy emigration. Allegedly, villagers from a remote, depopulated place on the Western coast of Japan want to convert their village into an industrial-waste bin and move their last inhabitants elsewhere with the proceeds of the sale (The Economist 2007). Taiwan has a TFR of one child per woman, one of the lowest in the world along with Hong Kong and Macao (Population Reference Bureau 2010a). Several cities in Italy and East Asia have fertility levels even lower than one child per woman. Only old and sometimes very old people can be found in some European or Asian urban neighborhoods. Many villages have disappeared in Russia and entire cities in parts of Germany and Eastern Europe experience socioeconomic decline because there are just not enough people. The spiral of decline, both demographic and economic, appears to be overwhelming. Low fertility is not confined to Europe or East Asia. For example, Addis Ababa, the capital of Ethiopia, had a TFR below replacement level during the 1997–2000 period, and TFR has stayed at that level ever since (Teller and Hailemariam 2011: 64–65). Some other cities, e.g., in Southern Africa, could follow suit.

Obviously, both situations, be it the hotspots or the "cold spots", are different and call for different policy responses. Some countries must accelerate their fertility transition, whilst other must try to increase fertility levels, improve mortality conditions, and/or increase immigration. The policy responses must be varied and coordinated, i.e., multiphasic (demographic and non-demographic, implemented together or in steps) (Davis 1963). Inter-regional agreements must be sought as well**,** as migration streams may be a source of conflicts unless migratory movements are regulated. A stronger commitment from the international community will be necessary. It will have to increase its financial assistance in an attempt to mitigate the migration push factors in countries sending emigrants. It will also need to remain watchful of trafficking of weapons and mineral resources, money laundering, and the ever-present corruption that rots many states.

It should be stressed that there is no simple solution. This is demonstrated by the limited success so far to stop and reverse negative population trends and/or to deal with the aftermath of immigration. However, some countries have succeeded to rebuild their social fabric after major disruptions. For example, Rwanda has bounced back remarkably after the tragedy of 1994. More recently, it has also decided to tackle its high levels of fertility and has been quite successful in doing so.

Conclusion

This review of the main features of the contemporary demographic landscape has shown that populations that make up the world population are diverse. They range from rapidly expanding to severely contracting populations, from

immigration-welcoming to immigration-adverse settings, and from youthful to rapidly aging societies (Smil 2005b: 605–643).

The demographic transition is well underway everywhere around the world, except in the least developed countries and particularly in sub-Saharan Africa (although it is most advanced in Southern Africa). In these countries, the peak of the population growth and the youth bulge are still to come. Very high fertility levels, despite the threat of the HIV/AIDS epidemic, jeopardize poverty reduction efforts and prospects for socioeconomic development.

On the contrary, developed countries have in a way gone *beyond* the demographic transition process. This fulfills Adolphe Landry's prediction, voiced in 1934, of sustained very low levels of fertility at the end of the demographic revolution (Landry 1934/1982: 72). These countries are now confronted with issues of low fertility, population aging, and immigration.

Governments often attempted to address population issues through their policies, directly or indirectly. This process is usually carried out at national level, but is made more challenging because of the fragmentation of the world into more than 240 countries and geopolitical entities. The nature of these policy responses is the subject of the next chapter.

Chapter 3
Population Policies Framework

In politics, a straight line
is the shortest distance to disaster.

John P. Roche (1923–1994)
American political scientist

Most governments and public authorities have addressed population issues at national (or state) level. First, they collected the demographic data they needed, in the form of censuses, civil registration systems, and more recently, surveys. Then, they designed specific public health and population policies, with respect to mortality, fertility, and migration, and attempted to implement them.

In the second half of the last century, these policies have become more systematic to tackle the pressing issues of rapid population growth and high fertility levels. Population paradigms also changed, with a shift from global targets to individual concerns adopted at the 1994 International Conference on Population and Development (ICPD) held in Cairo. The implementation challenges of the policies and their effectiveness also garnered more attention from policymakers.

This chapter presents the conceptual framework of population policies. After defining population policies, it exposes the Malthusian, Marxist, and Boserupian theories on population, assesses the relationships between demographic variables and socioeconomic development along with a discussion of the demographic dividends, and explains the new human rights considerations with respect to population and reproductive health issues. The chapter then examines the intervention variables and policy levers, describes the policy processes, instruments, and actors, and reviews the policies' implementation modalities and challenges with a specific analysis of sub-Saharan Africa.

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_3, © Springer Science+Business Media B.V. 2012

What Are Population Policies?

Population policies are defined as the actions taken explicitly or implicitly by public authorities in order to prevent, delay, or address imbalances between demographic changes, on the one hand, and social, economic, and political goals, on the other.[1] Population policies are generally prepared in the interest of the greater good and are meant to mitigate and, if possible regulate, perceived population problems by adjusting population size and age structure to the rights, needs, and aspirations of the people.[2] The proposed actions, which are specifically designed to address population issues, may be geared at one or several components of demographic growth, i.e., fertility, mortality, and migration. Such interventions are either direct, e.g., family planning programs to bring down fertility, or indirect, e.g., fiscal incentives to entice couples to have more children.

There is an ongoing debate about whether and how public authorities should intervene to accelerate the demographic transition, mitigate its adverse effects when fertility reaches sub-replacement levels, monitor and control migratory movements, and correct imbalances caused by increases or decreases of the population and changes in the age structure. Some have contended it might be better to let natural and self-regulatory mechanisms do their work (as eloquently proposed by Demeny 1986: 474, 2003a). Others, on the contrary, have called for direct and/or indirect actions (Sauvy 1987). In the case of mortality reduction, there has been a large consensus in favor of interventions. Recent decades have also seen the strengthening of arguments in favor of fertility reduction in situations of high fertility, through the expanded provision of reproductive health and family planning services. In contrast, there is much less consensus regarding the desirability and effectiveness of population distribution (resettlement) programs. In developed countries, public authorities have often been reluctant to implement pronatalist policies. They have also encountered major difficulties when trying to address the issues related to immigration (including refugees).

Demographic trends are essentially the result of decisions people make as individuals or as couples, their aim being the achievement of individual and/or family-level goals. At global level, however, the sum of these individual and personal decisions can sometimes have adverse effects, which economists have labeled "negative externalities". Externalities result when societal costs and benefits are out of line with those that are taken into account by individuals, so that the costs to society are greater than those borne by individuals (with similar considerations on the benefit

[1] This definition, as proposed, is an attempt to summarize numerous definitions of population policies; see Anonymous (1983), Gérard (1983), and Demeny (2003a). As mentioned in the General Introduction, the term "population" covers two main areas: reproductive health issues and broader demographic issues; see World Bank (2007b: 1).

[2] Some policies, e.g., Germany before World War II, were not designed to serve "the rights, needs, and aspirations of the people", but rather the goals of the state.

side). For example, high fertility levels may bring wealth and power to some families, but jeopardize the well-being of the community and its physical environment by depleting natural resources, causing deforestation in the case of agrarian societies, aggravating unemployment and poverty levels, and/or creating anarchic urbanization (Hardin 1968; Pebley 1998). The presence of such externalities was a key rationale that led governments to adopt (and donor agencies to promote) population policies aimed at reducing fertility rates in poor countries. Two crucial issues are how to balance individual and societal freedoms, rights, and responsibilities, and whether the adverse societal consequences of demographic trends are serious enough to warrant an abridgement of individual rights and freedoms (e.g., China).

In addition to the argument about the negative externalities, two other economic considerations have been used to justify interventions in the area of population. The first encompasses what might be called "social compacts" in the sense that a society may decide, for reasons of equity and fairness, that every person should have access to certain basic goods (e.g., the survival of children) regardless of his or her capacity to pay for them. Second, the concept of wealth redistribution, for instance through sales and income taxes, can also be advocated as a way of ensuring access to these goods. These arguments go beyond economics, as they involve political, ethical, philosophical, and human rights considerations.

Nation states are the prime actors that implement population policies. The legitimacy of states derives from their obligation to pursue the common well-being of their citizens. In addition, states are usually (although not always) best placed to safeguard human rights and the principles of equity. Consequently, population policies have usually been designed at national level. However, states may come under pressure from transnational forces eager to influence specific policy outcomes, such as international public opinion, international lobbies, or established religions and faith-based organizations. The efforts to reduce maternal mortality are a good example of an agenda driven by international non-governmental organizations (NGOs). Development agencies, multilateral as well as bilateral, have often assisted states in the development and implementation of population policies, particularly in less and least developed countries. Recently, it has also become clear that interventions in the social sectors are necessary to foster economic growth. Thus, the task has been for such international organizations to promote the availability of these publicly provided goods in order to improve human development outcomes (namely education, health, nutrition, population and reproductive health, and social protection).

In conjunction with the efforts of the public sector, the private sector can also play an important role in the implementation of population policies. NGOs have greatly contributed to population programs and population research (e.g., community-based organizations, private commercial enterprises, and volunteer associations; see McNicoll 1975). Community-based systems and social marketing methods have been used to distribute health products such as oral rehydration salts, contraceptives, impregnated bed nets (to prevent malaria), and water purification tablets by making them available on the market.

The priorities and methods to reach policy goals have changed markedly over recent decades. Following the end of World War II, a global, macro-demographic

strategy prevailed. Its aim was to rapidly reach global quantitative objectives, mostly by curbing fertility. At that time, many specialists wanted to transform demography from a social to a policy-oriented science (Hodgson 1983). This interventionist streak was then reinforced by the emergence in the 1960s of the *Population Movement*, which had received strong support in the US (Donaldson 1990; Harkavy 1995; see also Chap. 4, *Focus: The Population Movement*).

The predominant approach adopted by states and advocated by international organizations in the 1960s and 1970s was later viewed as neglecting the rights and aspirations of individuals and couples (May 2005; United Nations 1995b). Considerations about individual rights and needs were reasserted during the 1994 ICPD. The ICPD, often referred to as the Cairo Conference, reframed population issues in terms of global development and the fight against poverty, advocating for a multi-sector approach. It also integrated family planning in the larger context of reproductive rights, which encompasses actions to improve reproductive and sexual health, decrease maternal mortality levels, and slow down the spread of the HIV/AIDS epidemic and other sexually transmitted infections. Since it favored a bottom-up approach and stressed individual choices, this new focus on reproductive health called for a more active role by communities, NGOs, and the private sector. It was complemented by a concern for fundamental human rights (such as access to services), including efforts to foster women's empowerment and reduce gender inequality, and a greater recognition of the needs of adolescents (United Nations 1995b: 22–25 & 49–51). Subsequent international conferences shared these concerns and it was the main theme of the follow-up to the ICPD, namely the ICPD+5 and ICPD+10 gatherings, which also included a major meeting at the UN General Assembly in 1999.

Malthusianism and Marxism

Population issues polarize ideological and political camps. During the nineteenth century, Malthusians and Marxists bitterly disagreed on the nature and even the existence of demographic problems (Charbit 2009: 1–8). During the second half of the twentieth century, partisans of proactive interventions on demographic variables clashed with those in favor of laissez-faire policies. More recently, environmental concerns have given renewed prominence to the debate concerning population and resources (e.g., access to water). The divide between pessimists (population growth will deplete finite resources) and optimists (human populations can always adapt to new challenges) remains to this day.

This is illustrated by the debate that took place between Paul R. Ehrlich, author of *The Population Bomb* (1968) and *The Population Explosion* (1990) (see also Ehrlich and Ehrlich 2004), on the one hand, and Julian Simon (1932–1998), author of *The Ultimate Resource* (1981), on the other (on this controversy, see Simon 1996). One should also mention the divide between "explosionists", who are concerned with rapid population growth, and "implosionists", who fear depopulation (Butz 2006).

The assessment of the relationship between demographic variables and socioeconomic development has long been dominated by the Malthusian analysis. The famous *Essay on the Principle of Population* by the Reverend Thomas Robert Malthus (1766–1834) was published anonymously in 1798 (it is the First Essay**;** five other editions, considerably augmented, were published between 1803 and 1827). In his 1798 Essay (on which this short analysis is based: see Malthus 1798/1976), Malthus asserts that population growth follows a geometric progression, whereas the production of subsistence increases according to an arithmetic progression. Eventually, the two curves diverge (later, Malthus will expand his theory to include all resources). Generally, the population surplus (compared to the available subsistence) is corrected by wars, famines, and epidemics (the positive checks). Man, however, can contribute to avert such catastrophic adjustments through preventive checks, such as late marriage and chastity before and restraint during marriage (Malthus, who was a Christian moral scientist, did not condone the use of contraceptive methods; these were advocated later by the neo-Malthusians).

All these responses to demographic growth stem from individuals and these actions are taken at level of couples, since state interventions are considered inefficient. On the whole, the Malthusian doctrine took aim at the optimists mentioned in the title of the First Essay. Nonetheless, the Malthusian analysis was perceived as pessimistic (although Malthus believed in the benevolence of the Creator and the transitory nature of the sufferings caused by the principle of population). In the subsequent editions of his Essay, Malthus brought numerous nuances and corrections to his initial analysis (see Charbit 2009: 9–49).

During the nineteenth century, the alternative to Malthus' proposition was the theory of Karl Marx (1818–1883) and Friedrich Engels (1820–1895). The Marxist doctrine offered a dialectic analysis of capitalism and its perceived internal contradictions. Emphasis was given to the internal strengths of the proletariat (the industrial reserve army), that must strive to free itself from the exploitation of capital and take control of the means of production through the class struggle. Marx and Engels theorized their ideas regarding population issues in their Population Law of Capitalism (Charbit 2009: 146–149).

Marx and Engels directly opposed the individualist theories of Malthus. They considered population problems to be neutral with respect to the driving forces of history. According to them, the state has no role to play on demographic variables; actually, the state is not even part of their analysis. Overall, the Marxist doctrine is dynamic and optimistic (Charbit 2009: 121–157). Indeed, Marx and his followers attacked the perceived "pessimism" of Malthus, with Pierre-Joseph Proudhon (1809–1865) even accusing Malthus of being "*l'homme de trop sur la terre*" (Hecht 1988: 62). The Marxist doctrine applied in the communist countries has usually downplayed the population factor and induced on the part of the state a laissez-faire attitude with respect to population issues.

More recently, new ideas have been proposed that have helped nuance the debate between Malthusians and Marxists. First and foremost is the theory of creative pressure that was proposed by Ester Boserup (1910–1999), a Danish economist. In her seminal volume *The Conditions of Agricultural Growth* (1965), Boserup challenged

the Malthusian linkage between man and production by re-assigning to the former the role of the independent variable of the production system. In her later works, she widened her analysis to take into account the evolution of technology and the improvement of woman's status (Boserup 1970, 1981). Second, the focus on ideational changes affecting fertility has added a new dimension to the debate by reaffirming the importance of individual preferences and behavior (the process of diffusion and innovation), as opposed to the concept of adaptation and modernization (Cleland and Wilson 1987). Finally, it was also recognized that an economic crisis (defined as the worsening of economic conditions after an initial improvement) could trigger a fertility decline because couples may want to preserve their previous standard of living by limiting the number of offspring (for a discussion of the crisis-led transition, see Lesthaeghe 1989: 476–481).

Nevertheless, ever since the publication of Malthus' Essay, the relationships between socioeconomic variables and population growth have been hotly debated, especially with respect to the developing countries (Kelley 1988; Blanchet 1991). For instance, India was used as a case study in the ground-breaking book by Coale and Hoover (1958), which asserted that a country that experiences a decline in fertility would achieve an increase in individual income. Other authors, however, have denied any major impact of demographic variables on socioeconomic development and "saw population growth as a fairly neutral factor in development performance" (McNicoll 2003: 229; US National Academy of Sciences 1986; see also Das Gupta et al. 2011).

Economists have been skeptical about the usefulness of family planning programs to reduce fertility, and particularly about the possibility to do so in poor settings. For example, Easterly (2001: 87–98) encapsulated economists' conventional ideas on such programs, which he dubbed "Cash for condoms?" The economists' skepticism is exemplified with less excess by Pritchett (1994), who stressed that changes in demand (i.e., in desired fertility) trigger fertility declines to a much greater extent than large-scale family planning programs. However, studies from Asia, Latin America, and sub-Saharan Africa estimate the effect of family planning programs on lifetime fertility to be on average between 0.5 and 1.5 children less, with most studies suggesting an effect to the lower end of this range. The effects differ depending on the length of exposure to the programs, as well as their intensity and implementation effectiveness (World Bank 2007a: 88–89).

In fact, such economic analyses should be complemented by a closer look at the way social change takes place. Several phenomena, such as the strengthening of women's rights, new cultural models, the ideational changes already mentioned, the role of mass media (Westoff and Rodriguez 1995), and the emergence of community empowerment are all factors that challenge the economists' classic approach. Proponents of social change cite the example of Bangladesh where the decrease in fertility occurred in the mid-1970s and the 1980s, despite the persistence of widespread poverty, and was most likely triggered by an extensive family planning program (see Chap. 9, *Focus: Bangladesh's Fertility Transition in a Poor Setting*). By contrast, Pakistan's total fertility rate has declined later than Bangladesh's. Since the two countries are culturally similar and were politically united until 1971, the

divergence in their fertility transitions appears to be linked to political commitment and large-scale family planning efforts that have taken place in the latter, but not in the former.

More than two centuries after the publication of Malthus' First Essay, there is still no clearly identified causal chain, which makes it difficult to approach the subject of population and development. In fact, causality can take different directions according to the demographic growth rate and/or the development level of the population being studied. Malthusians and Marxists opposed one another on what were essentially hypotheses rarely supported by facts, and which often turned out to be wrong. Although Malthus based his analysis on many observations across the world, the economic evolution and especially technological advances eventually disproved his theory. As for Marxist countries, they were initially partisans of laissez-faire policies (despite sometimes enacting anti-abortion legislation to boost fertility, such as in Romania; see Kligman 1998: 52–59). However, in the end, they generally adopted policies to reduce fertility, and coercive ones for that matter in the case of China (see Chap. 8, *Focus: The Chinese Experiment*).

One might also assert that the demographic transition theory has brought to some extent a new rationality to the debate on population and development. Backed by an enormous amount of empirical data, the theory has enabled a better understanding of the stages of the demographic transformation process by offering a framework for change and its main variables. The theory has demonstrated the essential role of the decline of mortality in triggering the process, but also the importance of a decline in fertility. A recent extension of the demographic transition theory attempts to take into account migration flows, which usually occur at the end of the transition. However, it is important to remember that the demographic transition theory offers mostly retrospective analyses and that its predictive value is not firmly established.

To conclude, the controversy between Malthusians and Marxists has been more ideological than evidence-based and more theoretical than empirical. Nonetheless, these discussions did inspire neo-Malthusian policies and did influence the concerned populations. However, Marxists often reacted by adapting on their own to the evolution of demographic variables when they perceived them as potential threats to the future. It was only after World War II that states began in earnest to influence demographic variables, first by intervening to push back mortality, then by lowering fertility (through family planning programs), and finally by promoting more comprehensive population policies.

Population and Socioeconomic Development

As illustrated by the controversies between Malthusians and Marxists, optimists and pessimists, as well as "explosionists" and "implosionists", the relationships between demographic variables and socioeconomic development are complex. A main challenge is to assess the consequences of population growth on economic growth and, conversely, the effects of economic growth on demographic trends. Since fertility is

a key variable that explains most of the past demographic growth in the developing countries, one needs also to examine the relationships between socioeconomic development and fertility. Does socioeconomic development favor a decline (or occasionally, an increase) in fertility? Or, on the contrary, does a decline in fertility contribute to economic growth?

The overall debate on demographic variables and socioeconomic development has been approached from four different angles. A first issue, and one that is most often recognized, is the number of people in relation to the available resources. This is captured by the notion of population pressure, i.e., the number of people in relation to the natural and other resources of a given territory. A population that is too large or growing too rapidly is viewed as out of balance with respect to its capacity to achieve socioeconomic development. Population pressure manifests when the increasing population size brings a decrease in the standards of living. The concept of population pressure is thus linked to the notion of optimal population, also called population optimum (van de Walle 1982: 102). Population growth is believed to be adequate when it does not exceed natural limits (e.g., territory or resources), and does not bring a decrease in standards of living. For example, population pressure on available lands can compromise agricultural production and peasants' income. Population pressure may also be felt in cities, where the arrival of numerous immigrants from rural areas combined with the fast demographic growth experienced in many urban settings, makes it necessary to quickly expand the equipments and infrastructure. Population pressure can also strain public budgets (education, health, infrastructure, etc.), compromise the protection of the environment, and cause a relative decrease of natural resources such as fresh water (a serious challenge in the future). Moreover, population pressure may jeopardize soil conservation and the supply of energy (e.g., firewood in traditional economies).

However, it is difficult to measure population pressure precisely. The indicator most commonly used is the population density, i.e., the number of inhabitants per sq. km. The density can be calculated for the entire country, or for smaller geographical units. It is also possible to calculate the density for urban or peri-urban zones, and even to calculate the population density per unit of usable, cultivated, or cultivable area, therefore taking out lakes, rivers, infrastructure, and so on, in order to relate population to usable land. Taking into account certain thresholds (which need to be defined), these indicators can point to overpopulation, although population densification can improve health outcomes as well as income (McGreevey et al. 2008). Overpopulation is defined as an excess of inhabitants on a given territory, the number of people being higher than the optimum population. Other overpopulation indicators can be used for agrarian societies, namely the fragmentation of land or family farms, the increase in the price of land (purchase or rent), the percentage of peasants without land (non-owners or renters), the types of technologies used, the different ways land is being used, and sometimes the number of calories consumed per person per day. Other indicators, such as unemployment rates, have been used also as proxy measures of population pressure.

A second constraint, which goes well beyond the number of inhabitants, is the rate of demographic growth (usually caused by high fertility levels, but sometimes

also by declining mortality and immigration). Arguably, a consensus has emerged in recent years around the idea that very fast population growth exerts severe constraints on countries and regions at low levels of socioeconomic development (Kelley 1988; Birdsall et al. 2001). On the basis of empirical findings, the World Bank (1984, 1994b: 37) estimates that a population growth rate above the threshold of 2% per year could slow down the increase of income per capita in poor countries. Poor countries also most often have high fertility levels and a young age structure, which contributes to the demographic growth due to the population momentum phenomenon.

A third problem is the increase in human capital investments and social demand for services (e.g., health, education, infrastructure, etc.) triggered by the rapid rate of demographic growth. Human capital investments are the expenses necessary to train the workforce according to the needs of the economy. These needs are more difficult to satisfy when the population is growing fast, the age structure is young, and the dependency ratios are high (i.e., the number of dependents compared to the total number of working age adults). The social demand encompasses all the expressed needs of the population in the areas of health, education, food, housing, infrastructure, and employment. When it comes to education, a rapid growth of the school age population makes it more difficult to raise the attendance ratio in schools, leaving alone considerations of quality. The same reasoning can be applied to the other social sectors, in particular health.

Fast demographic growth may translate into the increased mobilization of financial resources for the social sectors and the infrastructure, thereby taking away investments from the industry and other directly productive sectors. Rapid demographic growth may also increase the number of workers, making their absorption into the labor force more difficult (possibly increasing unemployment), as well as lowering wages (although the latter might be beneficial). In situations of very rapid population growth, efforts to meet human capital investments and social demand must be constantly accelerated just to preserve the status quo (the "treadmill" effect). Rapid population growth can also threaten the macro-economic stability of a country, because considerable financial resources have to be mobilized for these expenses. Therefore, slowing down the population growth rate appears to be a necessary, yet not sufficient, condition to achieve sustainable socioeconomic development.

The fourth and final issue pertains to the consequences for a country's economy of changes in the age structure and dependency ratios. Arguably, this last phenomenon is the most important element highlighted by recent economic research (Birdsall et al. 2001: 8). The situation of East Asian countries shed light on the impact of sharp fertility declines on economic performance before the crisis of 1997–1998 (this has been called the demographic dividend). By diminishing the relative proportion of youth, a rapid decline in fertility reduces the dependency ratios between generations and boosts the share of the potential labor force. This opportune moment in a country's demographic transition is known as the "demographic dividend", as it can unleash enormous economic gains. The large labor force and shift in dependency ratios enables governments to raise human capital investment levels (in particular for health and education) and also increase their

economic investments. Rapid declines in fertility are credited for almost half of the economic growth in the East and Southeast Asian economies (Lee and Mason 2006). Other authors, however, stress the importance of the education revolution in those economic gains (Lutz et al. 2008a). In fact, changes in the age structure can only be exploited when they are accompanied by adequate investments and sound public policies. Economic gains and rapid development due to the demographic dividend is not a given. Moreover, the demographic dividend is not a permanent state.[3] Rather, it is an opportunity that countries must seize over a relatively short period of time before population aging sets in (Bloom et al. 2003).

Focus: The Asian Demographic Dividends

East and Southeast Asian countries stand apart from the rest of the world because of their extremely fast fertility transitions. In 1960, South Korea, Hong Kong, Singapore, and Thailand had total fertility rates (TFR) greater than or equal to five children per woman (and higher than six in Thailand). In 2010, all these countries had TFRs lower than replacement level (2.1 children per woman), and most of them had already reached such low levels in the 1990s. During the same time, these countries benefited from spectacular economic growth rates. This was called the "Asian economic miracle" and the countries were dubbed the Asian Tigers. Overall, their economies grew at more than 4% per year during the period 1970–2000, as measured by actual growth in gross domestic product (Lee and Mason 2006). To understand how this happened, one needs to look at the relationships between demographic variables (especially fertility and the age structure) and economic development (Birdsall et al. 2001).

It appears that the fertility decline experienced in those countries was the outcome of proactive and well-managed family planning programs *combined* with significant increases in the rate of economic growth. On the one hand, contraceptive prevalence rates (modern methods) increased rapidly, sometimes by more than two percentage points per year (Robinson and Ross 2007b). On the other hand, rapid economic growth enticed women to participate more in the labor force, and this came with opportunity costs that helped also reduce fertility levels.

However, one cannot ignore the considerable investments in the areas of health and especially education, including female education (the "education revolution"; see Lutz et al. 2008a). The implementation of these interventions was made possible thanks to strong government administrations and programs. In addition, the specificity of the Asian family structures dominated by nuclear-type families, in which reproductive decisions are taken jointly by husband and wife who have also common economic interests, was a facilitating factor (Caldwell and Caldwell 1988: 24). These elements contributed to spectacular declines in fertility.

The next most important demographic change, linked to rapid fertility declines, was the transformation of the age structure. Rapid fertility decline reduced the relative weight of the young age groups and brought more favorable dependency ratios as economically active adults (15+) had fewer children to provide for. The labor force temporarily grew faster than the dependent population and more resources became available for investments in human

[3] As industrialization proceeds, it could be argued that the positive effects of the demographic dividend might decrease due to the rising costs of child rearing.

capital and economic development. Consequently, per capita income grew more rapidly. This *first dividend* (Lee and Mason 2006) can last several decades (five or more). Thereafter, lower fertility reduces the growth rate of the labor force and the dividend disappears or may even become negative. However, a *second dividend* is possible. Since the population becomes older and is facing longer periods of retirement, it has stronger incentives to accumulate more assets in order to enhance financial security during old age. When these assets are invested domestically or internationally, the national income rises again.

In sum, the first dividend may be viewed as a bonus, which is eventually transformed by the second dividend into greater assets and sustainable development. While the first dividend is time-bound, the second dividend can in principle last indefinitely (Lee and Mason 2006). Evidence from East and Southeast Asia has shown that both demographic dividends accounted for 44% of the actual growth in output per effective consumer between 1970 and 2000. With the exception of sub-Saharan Africa, all regions of the world experienced demographic dividends during the same period, although not all regions (e.g., Latin America) were able to capture their benefits (Lee and Mason 2006).

When the first window of demographic opportunity becomes available, it must be accompanied by adequate policies if it is to be captured to its fullest extent. Public authorities in Asia seized the opportunity. They complemented demographic changes with energetic public investment policies in the areas of health and education. In some cases, they even compelled households to save, sometimes through authoritarian means (as in Singapore, where compulsory savings put aside significant percentages of salaries). Governments also promoted productive employment and boosted industrial investments to increase exports. Moreover, in the beginning of the process, states protected their young industries. Their successes were the result of a positive synergy between favorable demographic circumstances, sound macro-economic policies, and broad productive employment opportunities, not to mention large foreign investments.

Nevertheless, the economic policies of the Asian Tigers varied widely from one country to another. Some elements, such as sound macroeconomic management, were common, but others factors, such as degree of the government's intervention in the economy (e.g., protection of industries), were quite different (Singapore's proactive stance vs. Hong Kong's laissez-faire is a classic example). What was common is that all these countries converged during the demographic transition toward the *institutional frontier* of the developed world (roughly speaking, the norms of the OECD countries), and this was most conducive to economic growth. For example, China's institutions are nowadays more similar to institutions of any OECD country than they were 35 years ago under Mao's rule, even though they are still quite different from OECD institutional norms (Ying 2006: 328–329). The Asian Tigers were probably converging to different points on that frontier, having chosen different convergence paths. The fact that they were doing so during the period of demographic dividend resulted in outcomes larger than the simple sum of the demographic dividend and the "institutional convergence dividend".

At first glance, it might be harder to implement the same kind of policies in other sociocultural contexts, for example in sub-Saharan Africa (Eastwood and Lipton 2011), where institutional traditions, the structure of households, and the reproductive strategies of couples are very different from the situation found in Asia. However, some sub-Saharan countries could perhaps capture, at least to some extent, the first demographic dividend. For this to happen, as was established in the case of Ethiopia, they will need to address the three entry points of the demographic dimension of the dividend: promoting equitable development through female education, female empowerment, and overall income growth; creating an enabling policy environment to address demographic issues; and introducing population-specific interventions, such as family planning (World Bank 2007a: ii–xii; Bloom et al. 2007).

Capturing the *economic component* of the dividend, i.e., providing productive employment to large numbers of workers that lack adequate training and do not have many opportunities, might prove more problematic still. This will require important levels of investments, which could result from the faster demographic transition, but with some important

qualifications. The demographic dividend can work in three ways: when the share of working-age people in the population increases, any growth in the gross domestic product (GDP) per worker may result in higher growth in GDP per capita; savings rate may go up as more people of working age also means more savers; and investments in human capital per child may increase because the number of child dependents per worker goes down.

However, what can be done to capture these effects? First, the business environment needs to be improved to create incentives for investing larger domestic savings as well as foreign savings into the economy, and creating more jobs by doing so. Second, the financial sector needs to be developed to provide intermediation of savings into investments. Third, sensible labor laws need to be put in place to encourage formal employment. Fourth, social services such as health and education need to be expanded and strengthened to maximize the benefits of higher investments in human capital per child.

As economist and Nobel Prize-winner Robert Solow once pointed out, "a list of ingredients is not a recipe" and for different countries recipes will be different – in a sense that the policy ingredients listed above plus standard population policy components will need to be mixed in various proportions, depending on specific circumstances. The good news is that the causality between fertility decline and acceleration of economic growth goes in both directions during the window of the demographic dividend. Once the demographic transition has started, the virtuous circle might well become self-sustaining. In short, capturing the demographic dividend in sub-Saharan Africa might require a very different combination of policy ingredients than has been the case in Asia.

At the other end of the demographic transition spectrum, situations of prolonged declines in fertility, population aging, and depopulation can have negative consequences for the economy. The financing of retirement schemes, such as pay-as-you-go plans, becomes a problem when the proportion of workers diminishes compared to those who are retired. Pension systems based on capitalization, as in the case of Chile, may become less well funded when the return on investments decreases, translating into lower payments. Health expenditures also grow more rapidly in aging populations. Another less-known effect of prolonged periods of sub-replacement fertility is the slowing down of the economy (Chesnais 1995: 264–266). The relatively higher unemployment levels in Europe and Japan (MacKellar et al. 2004) could be explained in part by the decrease in fertility, its negative impact on investments (housing, equipment, infrastructure, etc.), and the lack of consumers that depress certain sectors of the economy (e.g., education, leisure). This could also, over the long term, jeopardize the stability of fiscal systems (Faruqee and Mühleisen 2001), and create an explosion of the public debt.

The classic debate on the relationships between demographic variables and socioeconomic development has also recently been complemented by a reexamination of the links between demographic trends, on the one hand, and efforts to reduce poverty and inequality, on the other. Family planning alone will not necessarily reduce poverty in developing countries, but neither will many of the current strategies to foster economic development. In fact, a slower rate of population growth, especially when combined with equitable economic development, gender inequality reduction, and human rights enhancement, may help reduce poverty and unemployment levels, especially in a context of accelerated globalization. Therefore, fertility reduction and family planning do matter, both for poor households and poor countries, although they might not be the only, or even the most important, factors in poverty reduction (Merrick 2002).

Human Rights Concerns

As mentioned, the 1994 ICPD brought a new dimension to population and reproductive health programs by asserting the importance of reproductive (and sexual) rights for individuals. The long March toward the affirmation of such rights started after World War II, with the efforts to draft key international declarations and documents on human rights. The Universal Declaration of Human Rights was adopted and proclaimed by the General Assembly of the United Nations on December 10, 1948 (United Nations 1998). Its key principle is that all human beings are born with equal and inalienable rights and fundamental freedoms. In its Preamble, the Declaration asserts the right to "freedom from fear and want" and affirms that men and women have equal rights. The Declaration also stresses that the people of the United Nations "have determined to promote social progress and better standards of life in larger freedom".

In its 30 articles, the Universal Declaration of Human Rights spells out these rights in more detail. Among these, two articles pertain directly to the freedom of movement (migration), as follows:

> Article 13
>
> (1) Everyone has the right to freedom of movement and residence within the borders of each State.
> (2) Everyone has the right to leave any country, including his own, and to return to his country.
>
> Article 14
>
> (1) Everyone has the right to seek and to enjoy in other countries asylum from persecution.

A long article of the Declaration covers issues of family and marriage:

> Article 16
>
> (1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.
> (2) Marriage shall be entered into only with the free and full consent of the intending spouses.
> (3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

Finally, the Declaration stresses the right for adequate standards of living, which implies access to health services, presumably including family planning (i.e., "necessary social services"):

> Article 25
>
> (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

(2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

The Universal Declaration of Human Rights "did not create any new rights but only declared those that already existed" (Cook 2003: 847). Consequently, the United Nations created a series of legally enforceable (at least in theory) international human rights treaties in order to elicit the commitment of member states and foster the implementation of the Declaration. These treaties are known as the International Covenant on Civil and Political Rights (the Political Covenant), the International Covenant on Economic, Social, and Cultural Rights (the Economic Covenant), and the Convention on the Elimination of All Forms of Discrimination Against Women (the Women's Convention). By signing these treaties, the United Nations member states did "accept international scrutiny of and accountability for their observance of these designated human rights" (Cook 2003: 847).

The two Covenants and the Convention affirm the rights to have or not to have children. The Political Covenant (Article 23, which is parallel to Article 16 of the Declaration; see above) expresses "the right of men and women of marriageable age to marry and to found a family". The Political Covenant affirms that "the family is the natural and fundamental group or unit of society". The Women's Convention (Article 1), however, stipulates that women have a right to reproductive health, "irrespective of their marital status". The Women's Convention also affirms the right of women to have "access to health-care services, including those related to family planning". In 1968, the Tehran International Conference on Human Rights had declared that "parents have a basic human right to determine freely and responsibly the number and the spacing of their children".[4]

All these efforts culminated in the 1994 ICPD and the Fourth World Conference on Women, held in Beijing, China, in 1995, which asserted the "rights both to have children and to enjoy human sexuality without unwanted reproduction" (Cook 2003: 846). As the paradigm had shifted from a macro-level focus on population issues to approaches that emphasize the rights, health, and welfare of individuals, the Cairo and Beijing conferences contributed to establish the concept of reproductive rights for the individual.

The main issue, however, remains one of implementation. Rights can be perceived as "negative" and "positive", depending on how they are enforced. Negative rights typically reflect the absence of restrictions or obstacles for a person to fully exert a choice. Freedoms often fall in this category, as they demand the absence of restriction for a person to enjoy them. Freedom of speech, thought or religion are such examples. Unlike negative rights, positive rights require action and implementation for people entitled to such rights, for them to be fully enjoyed.

The assertion of reproductive rights can also be *negative*, i.e., individuals can exert their rights without interference from public authorities, they are free, and governments should leave them alone. But reproductive rights can be interpreted as

[4] See http://www1.umn.edu/humanrts/instree/l2ptichr.htm, accessed on November 15, 2010.

being *positive*, which translates into the obligation for governments to provide individuals with the means to exert their choices. Consequently, governments must proactively offer information on reproductive health services and ensure the availability of such services. They must also care for the disadvantaged in order to foster equity.

Overall, the emergence of the "rights-based" approach to reproductive health, which is rooted in broader concerns for human rights, has changed the rationale and implementation of population policies. Several United Nations agencies (e.g., UNFPA, UNICEF, etc.) as well as some key NGOs (e.g., IPPF) have fully integrated the reproductive rights agenda in their work program. However, this has been done later, and only to some extent, by other major development institutions (e.g., the World Bank). The Administration of US 43rd President George W. Bush (2001–2009) was opposed to reproductive rights all along, impeding efforts to promote reproductive health services, for the reason that such services could include abortion. Instead, it has proposed the rather arcane language of "reproductive health care". The same Republican Administration has also held to the concept of age appropriateness, which presumably encompasses two dimensions. First, youth and adolescents should not be given access to reproductive health services before a certain age (to be defined). Second, youngsters should be made aware, through specific information, education, and communication (IEC) programs, about the proper age to start their reproductive life. The latter consideration has led US-funded reproductive health programs as well as those designed to fight the HIV/AIDS epidemic to promote delayed sexual debuts, late marriage, and abstinence.

Intervention Variables and Policy Levers

When designing population policies, a major task is to determine which demographic variables are amenable to interventions. In this respect, it is necessary to distinguish between passive and active policy measures. Passive responses may be spontaneous or organized, and are often a mere adaptation to the effects of population growth or high fertility levels. They encompass, for example, the promotion of education and employment or development of housing schemes and other infrastructure strategies. Spontaneous migratory movements also belong to this category. Active responses, on the contrary, are meant to address the causes of population problems, such as high mortality and fertility levels, and seek to influence basic demographic conditions and trends. Measures pertaining to mortality and fertility as well as migration policies belong to this second category.

The choice of policy responses to population issues depends on the values of the policymakers. Certain courses of action are never proposed by governments, development agencies, and non-governmental organizations (NGOs), because they are considered immoral and, moreover, would never be accepted by the population. Such are proposals to slow down or even halt the decline of mortality to mitigate rapid population growth. A controversy was stirred by Maurice King

(1990) in the medical journal *The Lancet* when he proposed to slow down the decrease of infant and child mortality to avoid seeing some countries fall into the Malthusian trap, defined as the incapacity of a country to feed its population without outside help.[5] This proposal, regardless of the unbearable ethical and equity problems it raises, goes against the desire for survival rooted in human nature. The human will can only influence mortality in one direction: reduction (Verrière 1978: 98).

Public health interventions are usually aimed at reducing mortality levels. Experience has often shown that fertility reduction requires prior reductions in mortality, particularly in infant and child (under five) mortality.[6] Driven by the fear that several of their offspring might die in young age, many couples have a large number of children only to ensure the survival of a few. Therefore, a relationship may exist between the decline in mortality and reproductive behavior (Cleland 2003: 670). However, there is often a time lag between mortality reduction and fertility decline. Since sharp declines in infant and child mortality usually bring a rapid expansion of the population, they must be accompanied by declines in fertility as well. Moreover, mortality conditions of mothers and young children are themselves linked to high fertility levels. Therefore, decreases in fertility are needed also to improve survival prospects of infants and children, in addition to immunization campaigns and other public health measures.

The key demographic variable and the one that it is also relatively easy to bring down through adequate programs, is fertility. However, initial attempts to reduce fertility have been met with skepticism, due to early disappointments brought on by unsuccessful family programs in India and Pakistan (Sinding 2003: 365–366). Micro-economists have claimed also that fertility could not been lowered easily because couples value children (value of children theory) (Sinding 2007: 4). It took the first family planning successes in Sri Lanka and Colombia to prove that many women actually wanted to have fewer children and that programs aimed specifically at fertility reduction could work. Additional experience also demonstrated that family planning programs were not a magic bullet, but needed good social settings to succeed, although a few countries with poor settings (e.g., Bangladesh and Kenya) had made impressive strides in family planning. The micro-economists' value of children theory was further challenged by the ideational change theory, initially

[5] A community is demographically trapped (because of rapid demographic growth) when, with existing levels of technology: (1) it exceeds the carrying capacity of its local ecosystem; (2) there is nowhere to migrate to; and (3) there are insufficient exports to exchange for food and other essentials. The outcome of entrapment is the direst poverty, starvation, and sometimes violence. This is the *definitive stage.* In a rapidly growing community there is also a *warning stage* when, although starvation and violence have not yet broken out, they can be confidently predicted; see Mola et al. (2003), Section 3.3.

[6] Many family planning programs have addressed mostly the reduction of fertility, and sometimes have isolated this specific goal from mortality and broader socioeconomic considerations.

proposed by Ronald Freedman and further refined by Cleland and Wilson (1987). It was eventually recognized that fertility levels were driven by ideas and attitudes. As John Caldwell put it, family planning programs "talked fertility down". Overall, the rapid fertility decline that had been to a large extent engineered by three decades of population policies and programs was perhaps the greatest social experiment and public health achievement of the second half of the twentieth century (Robinson and Ross 2007a: ix).

Despite these successes, high fertility levels persist in numerous countries that have not completed their demographic transition, particularly in sub-Saharan Africa (Bulatao 1984). Furthermore, above-replacement levels of fertility and youthful age structures are recognized as being key determinants of future population growth. John Bongaarts (1994) has refined this analysis by disentangling the effects of unwanted fertility and the desire for a large family size (more than two children). This distinction has the advantage of being operational because it first responds to unwanted fertility by reinforcing family planning programs. Second, it addresses the desire for large families through expanded information, education, and communication (IEC) programs, as well as behavior change communication (BCC) campaigns. Finally, sound actions on fertility also require looking at the various policy levers (defined as entry points or instruments to implement the policy). There is a distinction to be made between the proximate determinants of fertility (biological and behavioral variables such as union patterns, breastfeeding, postpartum abstinence, and pathological sterility), the intermediate determinants (e.g., education, socioeconomic variables, and gender issues), and the contextual factors (e.g., cultural and religious norms, communication channels, and infrastructure) (see also Chap. 8, *Focus: The Bongaarts Model of the Proximate Determinants of Fertility*).

With respect to migration, especially international migration, it can be argued that this phenomenon is bound to play a major role in the next decades. The first major reason is that the fertility transition is already completed in half of the world's population, opening the way for the migratory transition. The second reason, linked to the first, is the globalization that further integrates the world economy. However, increasing numbers of international migrants pose many challenges, including the need to collect better data on migratory movements. Other challenges are the regulation of migratory flows and more recently, the security threat that might be posed by migrants originating from some countries.

From a policy viewpoint, countries may encourage immigration, such as Canada and the US. Countries may organize emigration, as the Philippines and Pakistan have done toward the Middle East and the Gulf region. These migratory movements can be spontaneous or organized (for instance, voluntary population redistribution or transmigration programs, as in Indonesia). Recently, Southern Europe (Spain, Malta, and Italy) has faced the arrival of illegal migrants from Africa who make the final leg of the perilous trip on makeshift boats. Several countries have expelled rather large numbers of immigrants (as Ghana in 1969 and Nigeria in 1983 and 1985). Programs of repatriation have also been organized, however without much success, to entice immigrants to return to their country of origin (e.g., Germany, France, and Switzerland).

As mentioned with respect to fertility, the choice of policy levers to implement population policies is important. If population policies can influence the different components of population change, especially fertility, then one must also accept that some actions can be more effective than others. Population policies can be used to intervene only on certain policy levers. For instance, policies can simply facilitate changes in reproductive behavior by making family planning services available. Policies may try to modify reproductive behavior by using explicit measures, specifically designed to modify demographic variables, or implicit measures, which comprise public sector activities that could influence these variables, whether the state wishes to do so or not (Johansson 1991). Policies can also modify reproductive behavior by using what are called institutional mechanisms with the view of changing the institutional settings or factors in which fertility decisions are made (McNicoll 1980: 443). These actions by the state are sometimes referred to as the "political economy of fertility".

Policy Processes, Instruments, and Actors

This section addresses three fundamental questions: What is the nature of population policy processes? What are the instruments or mechanisms available to implement population policies? And who are the various policy actors and stakeholders?

The population policy process consists of the conditions, events, and products that connect the initial idea of a population policy to its ultimate development, implementation, and evaluation. Several paradigms have been developed for describing the generic features of this process, and these typologies are useful for analytic purposes (e.g., Lindblom 1968; Berelson 1977; Micklin 1994; Hardee et al. 2004a[7]).

For some authors, the population policy process is comprehensive, sequential, and logical, one step leading to the next. The process begins with the recognition that demographic issues do exist and need to be addressed. The stages that follow may include some or all of the following: collection of information,[8] problem identification, creation of political and/or public support, and policy formulation (including costing), adoption, and implementation. Finally, the impact of the population

[7] Hardee and colleagues (*Ibid.*: 4) have developed a comprehensive framework called the *Policy Circle*. Although policymaking occurs within various political, social, cultural, and economic settings, the Policy Circle comprises six major elements: the Problems that arise requiring policy attention; the People who participate in policy and Places they represent; the Process of policymaking; the Price Tag of the policy (the cost of policy options and how resources are allocated); the Paper produced (actual laws and policies); and the Programs that result from implementing policies and their Performance in achieving policy goals and objectives.

[8] The need to know the different characteristics of the population and the collection of data (census, survey, civil registration, etc.) is already part of the process of elaborating the population policy. It is, in fact, its first step.

policy needs to be evaluated and, depending on the results, policy reformulation may restart the process all over again.

However, the population policy process is typically not a "straight line", i.e., a smooth and highly coordinated sequence of events that can be replicated easily in different socioeconomic settings. Therefore, the second interpretation of the process is that of multiple streams: the various streams being the identification of the population issues, the political reforms, and politics (the political process on a daily basis) that must sooner or later merge for political reforms to succeed. Sometimes policy innovation or reform can only be achieved when there is convergence between the perception of population problems, routine political processes (politics), and the organization of interest groups whose principal aim is to promote a population policy. Demographic issues tend to be identified and addressed according to timetables that differ from those that govern daily politics. Other policy reforms are often considered according to their own criteria, regardless of their relevance to the demographic issues at hand and/or the influence of the policies adopted previously. Moreover, the multiple streams process can operate dialectically.

The population policy process can also be antagonistic, for example in the policy dialogue between sovereign states and development agencies. The policy reforms proposed by governments can be opposed by some national constituencies (e.g., citizens, intellectuals, pressure groups, or communities). In short, one can identify a variety of social and political barriers that impede the development of national policies.

Whether the policy reform process is sequential or consists of multiple streams, high-level political commitment appears to be indispensable (Warwick 1982). To be efficient, policy reform must go beyond the recommendations of experts and technicians (sometimes already partisans of the policy reform) and reach to political leaders. In addition, population policies that have been pushed on countries by donors and outside agencies have generally met with little success; this happened because they seldom engaged constituencies whose participation was key to the success of the policy. For example, the efforts in Ghana to address population concerns, as spelled out in the 1969 document *Population Planning for National Progress* (Caldwell and Sai 2007), were introduced to a large extent from the outside using a top-down approach and initially they had a moderate impact. Eventually, the Ghana policy was revised in 1994 to better address the needs and aspirations of the population. The genuine involvement of the ultimate policy beneficiaries proved to be the only sensible way forward (Benneh et al. 1989; Population Impact Project 1995).

As for the policy instruments or mechanisms, public sector responses to demographic problems may take the form of population policies or at least social regulations in the developed countries. As mentioned, population policies are conscious actions by the state to address, in the interest of the public good, problems ascribed to imbalances between demographic variables and societal goals. Public authorities may or may not consider population issues to be their responsibility. Situations of strong population pressure or population deficit can be met by a lack of political reaction. Sometimes, pressing population issues cannot even be discussed, because the leadership does not have the "policy space" to address them. Indeed,

in some socio-cultural and religious settings sensitive issues (e.g., early marriage or access of adolescents to family planning services) may be considered politically off-limit.

The authorities can also consider that the demographic variables are not likely to be modified by deliberate public interventions. In fact, policy responses to population issues are motivated by an interventionist view of governmental action that considers it possible to act on demographic trends, directly or indirectly, and explicitly or implicitly (by lowering mortality, lowering or raising fertility, and regulating migratory movements). Population policies that aim to decrease fertility are called anti-natalist, while those that attempt to increase fertility are called pronatalist. Policies whose objectives are to increase population through means other than higher fertility, e.g., through immigration, are called populationist (van de Walle 1982: 107).

Population policy interventions include four instruments or mechanisms in both the public and private sectors, namely the availability of information, the laws and regulations, the taxation and subsidy mechanisms and direct investments, including the offer of services (Mosley et al. 1990). According to these policy instruments, fertility is most often regulated by making family planning information and services available. In an attempt to influence fertility, governments can also enact normative laws and regulations (Heckel 1986) or adopt institutional reforms (McNicoll 1980). Taxes and subsidies seem to be used less often. They may come in the form of payments for children (e.g., in Western Europe), tax-exemptions for child-care costs (e.g., in the US), or financial incentives (e.g., money given to individuals to accept sterilization).

Although direct investments in health systems and the organization of family planning services appear to be among the most efficient means available to governments for intervening directly on fertility, several indirect interventions that are beyond family planning may also be used successfully, such as investments in female education, financial incentives (conditional cash transfers), and enhanced female participation in the labor force (Berelson 1969). Of course, there are links among the four areas listed by Mosley and colleagues: for example, making family planning services available (direct investments) will be easier if advertising for contraceptives is authorized (laws and regulations). In addition, policies geared at lowering fertility must choose optimally between various paths to fertility reduction according to their acceptability, feasibility, and effectiveness (Berelson 1977).

As mentioned, the state may wish to implement measures to adapt to the effects of population growth, reduce population growth itself, or increase a low or even a negative rate of demographic growth. However, it is important to assess whether actions in this area should be undertaken by governments at national level in a strong and direct way or perhaps more discreetly at local level, using private and non-governmental organizations. The widespread intervention of the private commercial and non-commercial sector can lead to a loss of influence for states' policies, as happened in Haiti (see Chap. 6 for further discussion of the situation in Haiti). The problem of citizens' refusal to adhere to population policy measures, when these are considered too much of a constraint, must also be considered. It is

important that population policies and programs be endorsed by the general public as well as the target populations, and supported by efficient levels of intervention (centralized or decentralized) with responsibilities clearly defined and shared among the public and private sectors (Hyden 1990).

Various actors participate in the different stages of the population policy process. First of all, the regulatory answers to population pressure come directly from individuals, households, and specific social and/or geographic groups. These regulatory measures comprise decisions to seek new economic opportunities (for instance, cultivate new or marginal land), to migrate internally or externally, and to marry later and even choose celibacy (or choose not to have offspring). These varied responses (demographic as well as non-demographic) are said to be multiphasic, because they are applied simultaneously or in sequence.

Kingsley Davis (1963) has offered a list of the multiphasic answers to population pressure: the additional working hours agreed to (or secondary employment), the migration of some family members, and the reduction of fertility. Richard Bilsborrow (1987) has generalized this model for rural populations and farming economies. He distinguishes between economic answers (such as additional working hours), demographic responses (controlling fertility), and economic-demographic mechanisms (migrating to find a job). All these answers belong to the domain of social adjustment to population pressure, and are not part of population policies even though they might be encouraged by the state. When fertility stays very low, personal adjustments can also be made to counteract the population deficit. For example, people may save more in situations of population aging in order to build complementary pensions.

However, the state remains the most legitimate and natural actor to formulate and implement population policies, as its first obligation is the well-being of its people. Nevertheless, a distinction must be made between the law state or the legislative branch, on the one hand, and the acting state or the executive branch, on the other (Weil 1991). The first defines legislation, while the second tries to apply it. The difference between the two notions can be important when it comes to migration policies. Finally, in its endeavor to tackle population issues, the state can be supported by international and regional organizations (see Chap. 5, section “New Population Institutions”).

Implementation Modalities

The implementation of national population policy reforms by public authorities can take three forms: efforts to plan socioeconomic development, implementation of family planning programs, and/or adoption of formal national population policies.

Development planning is the administrative process by which governments define their socioeconomic development goals for the various sectors. These plans focus on the implementation of adaptive responses to the effects of population growth, particularly by trying to increase the rate of economic growth. The aim of

the development plans is to establish quantified socioeconomic objectives for the country and its geographic and administrative subdivisions. The magnitude of population growth may prompt the public authorities to incorporate this variable directly in the development plans, and even in sector-specific plans for education, labor, infrastructure, or housing (Stamper 1977). However, development plans are sometimes overtaken quickly by the speed of population growth and the approach of development planning is being used less frequently nowadays.

Family planning programs are a second type of intervention, this time by acting directly on fertility in order to reduce population growth. Often, family planning interventions are more likely to cover more of the supply of services than the creation of demand, although both approaches are complementary and work in synergy (Demeny 1992; Phillips and Ross 1992). In addition to reducing the population growth, family planning programs improve the health of mothers and their children by contributing to lowering maternal and infant mortalities. They also bring economic and financial advantages, as they reduce the magnitude of human capital investments.

National population policies, the third type of action by the public authorities, address demographic variables through all sectors. In developed countries, population policies are often implemented through social policies, which are explicit or implicit. In developing countries, the overall aim of population policies is not only to integrate demographic variables in sector policies, but also to create a stronger demand for a lower fertility (e.g., through awareness raising programs). Population policies include deliberate measures to modify fertility, mortality, or migration trends, and influence the aspirations of individuals and families. At the operational level, population policies are implemented through population programs and projects, which often focus on family planning information and services, along with data collection efforts. However, overall experience with population policies in developing countries has been mixed, as illustrated with the situation of sub-Saharan Africa.

Focus: Sub-Saharan Policies smothered by Bureaucracy

By the time the United Nations International Population Conference convened in Mexico City in 1984, many sub-Saharan countries had already started to prepare comprehensive national population policies. Such policies had been developed earlier in a few countries, in 1969 in Ghana (Caldwell and Sai 2007: 380) and even, arguably, as soon as 1965 in Kenya in the form of Sessional Paper Number 10 (Heisel 2007: 394). In the 1980s, these policies were inspired by the Kilimanjaro Program of Action on Population, which had been prepared at the Second African Population Conference sponsored by the United Nations and organized in Arusha, Tanzania, in 1984 in preparation of the Mexico Conference (World Bank 1986: 2). The 1994 ICPD led to the updating of several of these national population policies.

Given that most sub-Saharan governments were reluctant to adopt proactive demographic actions to influence marriage and childbearing, the model adhered to at the time was twofold. First, *ad hoc* bodies were created within the public administration to deal with population issues through the wider context of socioeconomic development. Population

Commissions or Secretariats were located generally in the Ministry of Planning, but sometimes in the Ministry of Finance and Economy or the Prime Minister's Office. Their role was to oversee and coordinate from a developmental perspective all population-related activities within the country. These population commissions were generally run and staffed by civil servants. Second, the national population policies themselves were lengthy documents on socioeconomic development that echoed what became known as the Kilimanjaro Declaration. Many priorities were addressed and all sectors covered, even when remotely related to population. As no priorities were clearly established, implementation was often disappointing. Occasionally, the adopted policies were only meant to foster the economy in order to adapt to the rapid growth of the population. In short, population-focused interventions were dressed into a politically correct developmental discourse.

The situation of Cameroon is a perfect example of this bureaucratic process. It also illustrates how African governments were shy to address population issues in the first place, and then failed in implementing the policies they had adopted reluctantly.

Cameroon's demographic situation is similar to that of many sub-Saharan countries. It is defined by high mortality levels, especially infant and child mortality, a high level of fertility, and a population doubling time of less than 30 years. Confronted with this situation, Cameroon's government progressively went from a policy of "nuanced pronatalism to a moderate anti-natalism" (Gubry 1988: 194). A few elements point to the pronatalist position of the government before 1980: laws prohibiting contraception, pronatalist fiscal perks ("*allocations familiales"*) for civil servants and wage-earners, and explicit endorsement, in the development plans, of demographic growth that was perceived as an asset.

The first change appeared in the speech of President Ahmadou Ahidjo (1924–1989, first President of Cameroon from 1960 to 1982) to the Cameroon's National Union Congress in Bafoussam in 1980, in part because the results of the 1976 Population and Housing Census had showed population growth to be much larger than expected. A population and development model, the RAPID (Resources for the Awareness of Population Impact on Development), had been prepared in 1978 with the help of Futures Group International. It illustrated the problems in meeting the necessary human capital investments due to sustained high fertility and population growth. The fact that some numbers from the RAPID report found their way into the President's speech shows the model's influence (Gubry 1988: 190).

The new anti-natalism remained moderate in the sense that few concrete actions were decided upon. However, the 1920 French Law prohibiting abortion and the advertisement of contraceptives (which was passed on Cameroon during the colonial period) was repealed in 1980. In 1984, a Ministry of the Feminine Condition was created, and a National Commission on Population established in 1985. A prudent reorientation of development plans could be felt, but it was 1987 before the Cameroon Association of Family Well-Being was created, and the preparation of the National Population Policy was initiated (it was finalized in 1993). Cameroon's reaction to the problems of population growth and high fertility thus came about very slowly. The cautious nature, both of speeches and measures finally adopted, shows the lack of a deep commitment to reducing the number of births (Bella 1998). Cameroon officially embraced an anti-natalist position, but failed to apply the corresponding measures (Gubry 1988: 194), and the overall implementation of the policy remained wanting.

A new version of the Declaration of the National Population Policy was adopted in March 2002 (Republic of Cameroon 2002). As with the first National Population Policy, this document aims to pursue many broad-based goals that are not directly related to demographic outcomes, such as "promoting the creation of jobs" and "ensuring better management and conservation of biodiversity", generic goals that no one would disagree with, but that were not directly related to the demographic issues at hand. Moreover, the document offers neither quantified targets, e.g., for increase of contraceptive use, nor a clearly defined time-horizon in which to achieve concrete results. It also devotes a mere two paragraphs to

the key issue of monitoring and evaluation (M&E). By contrast, the punchier Declaration on Population Policy adopted in Niger in 2007 (Republic of Niger 2007), with clear-cut objectives to be reached before 2015 on family planning and age at marriage, along with a comprehensive M&E plan, appears much more focused and better designed, although its implementation has been challenging.

It is hard to rank chronologically, or even logically, the different types of operational modalities for policy implementation, whether it is development planning, family planning programs, or national population policies. The choice of an operational modality depends on the country context and is often a result of the debate between "developmentalists" (the solution to population pressure is through socioeconomic development) and "family planners", convinced that only family planning programs will alleviate population pressure. Although the debate became somewhat less polarized during the 1980s and the 1990s, the choice of implementation modalities is influenced by development agencies, transnational networks, and international coalitions active in the area of population.

Implementation Challenges

Population policies do not operate in a vacuum, but are implemented against the backdrop of contextual variables, such as education and employment levels, health, urbanization, gender roles, cultural norms, and religious beliefs. Population policies are also implemented within the specific administrative settings of the states. Finally, policies may face funding constraints.

The contextual variables appear to be most important and may yield negative or positive effects on the outcomes of the intended policies. Population policies may also encounter constraints in the form of traditional resistance and/or ideological opposition. Nevertheless, policies may benefit from higher levels of female education, the impact of mass media, and the ideational forces at play.

It is not easy to establish a clear path of causality between the contextual variables, on the one hand, and the demographic outcomes, on the other. However, the relationship between education and fertility has long been recognized and, so goes the argument, the higher the education attainment, the lower the fertility level. John Caldwell asserted that the onset of the fertility decline begins in earnest with the advent of "compulsory mass schooling" (Caldwell 1982: 183). However, it seems that a substantial number of years of schooling are required before an effect on fertility can actually be demonstrated. The literature shows that at least 8 years of female education are needed to have an impact on fertility, although national situations may vary. The study by Lloyd et al. (2000) on sub-Saharan Africa showed that the relationship was inconclusive when using a cut-off point of 4 years of formal education (Grade 4). On the contrary, research conducted in Ethiopia shows that 4 years of primary education do have an impact on fertility levels. Moreover, in that country, such an impact appears to have a positive externality, i.e., a woman without

education but living in communities along with educated women would have a lower fertility as well (World Bank 2007a: 82–87).

The relationship between health and population outcomes is no less important. The causality is quite obvious in the case of mortality. However, the relationship also plays a major role in fertility. As mentioned, there is a relation and perhaps a synergy between infant and child mortality levels, on the one hand, and fertility outcomes, on the other. Similarly, employment variables are crucial as well. Female paid employment has an impact on fertility levels, and so does the control that a woman has over her income. Urbanization is also a key determinant of mortality and fertility. Although urbanization may affect mortality positively (access to health care) or negatively (urban pollution and/or slum conditions), it usually lowers fertility levels and increases contraceptive prevalence rates, as consistently found in surveys. Last, but not least, the gender balance (or lack thereof) also has a profound effect on fertility outcomes, and so do cultural norms and religious beliefs.

Specific bottlenecks may hinder the implementation of population policies, such as poor administrative capacity and lack of sufficient infrastructure. The lack of a strong administration, as in sub-Saharan Africa, or the fragmentation of the institutional policy actors, as in some developed countries, might be severe impediments to policy implementation. The lack of health facilities, schools, or infrastructure may also slow down the implementation of policies. Rural areas, in particular, must be served by a network of roads, transportation, and communication systems in order for services to be available.

The integration of countries into the world economy also affects the implementation of policies. In developing countries, population policies operate within the context of overall flows of international aid and access to international markets, which both predicate their economic development outlook. However, other factors may play an even more important role, such as increased control over economic policy by poor countries, financing of new development-friendly technologies, and the opening of labor markets in industrialized countries (Birdsall et al. 2005). International pressure to improve governance in developing countries is an additional factor.

Finally, funding shortfalls may hinder the implementation of population policies. Externally funded policies and programs may suffer from the volatility of international funding. Governments may not have enough resources to implement interventions, especially those that entail large human capital investments, such as education and health. Fiscal space may be constrained and must exist or be created in order to mobilize additional resources for government spending. Fiscal space can be defined as the "room in a government's budget that allows it to provide resources or a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy" (Heller 2005: 32). In short, fiscal space is the long-term sustainability of short-term commitments. A government may create fiscal space by raising taxes, securing external grants, borrowing money (from its citizens or from external sources), borrowing from the banking system (therefore expanding the money supply), or by cutting lower priority spending.

Conclusion

The rationale for intervening on population variables fueled a lively debate over the past two centuries. The rationale for demographic action has regained strength and credence over the past decade, because the relationship between demographic variables and socioeconomic development has become better understood. In particular, a closer examination of the Asian experience has led to a re-assessment of demographic variables with less emphasis on numbers and more on rates of growth, age structures, and dependency ratios. This has helped formulate the theory of the demographic dividends and reinstated the importance of macro-demographic considerations.

However, another key feature has changed the tone of the debate on population, and this has worked in an opposite direction. Since the 1994 ICPD, discussions on population issues have been re-centered on reproductive rights and the needs of individuals and couples, leading to a relative de-legitimization of the traditional demographic discourse. At this juncture, the challenge will be to reconcile the macro-demographic approach with human rights considerations. As more attention will need to be paid to the aspirations of individuals, population interventions will also need to be designed within a broader developmental framework, in order to help balance individual behavior with collective responsibility. The next chapter will examine the first public health and population programs.

Chapter 4
First Public Health and Population Programs

Here are the tears of things;
mortality touches the hearts.

Virgil (70–19 BC)
Classical Roman poet

Initial efforts in the area of public health and population were geared at reducing high mortality levels and proved to be rather successful, particularly in developing countries. These first initiatives were followed by programs aimed at controlling, and sometimes eradicating, specific diseases. On this count however, results were mixed, a situation illustrated through the divergent examples of malaria and smallpox. Thereafter, governments launched large immunization campaigns (e.g., against poliomyelitis) with considerable logistical means and levels of funding, and obtained positive outcomes.

The survival of large numbers of people as a result of disease control and mortality reduction accelerated the rate of demographic growth. Fertility levels were still high and remained so in many developing countries. These trends, which lasted until the late 1960s, made the need to address the issue of rapid population growth and high fertility more compelling. Several vanguard countries, such as Japan, either enacted fertility reduction measures or, in the case of India, initiated broad family planning programs. Subsequently, other countries like Egypt launched family planning programs. International know-how and funding – under what is known as the *Population Movement* – helped to expand these programs, which became better organized and widespread in developing countries. This heralded the beginning of the worldwide global family planning revolution, with exceptions of the least developed countries (LDCs) and, in particular, sub-Saharan Africa.

This chapter analyzes the first modern interventions in the area of public health and population. It covers the period from the end of World War II until the first major international conference on population which was organized in 1974 in Bucharest, Romania. The chapter first reviews initial efforts to reduce mortality, programs on specific diseases, and the Expanded Program of Immunization (EPI).

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_4, © Springer Science+Business Media B.V. 2012

Then, it analyzes the vanguard family planning programs, and the expansion of family planning efforts with a focus on the international family planning movement. Finally, it describes the components of family planning programs and pays a tribute to Mechai Viravaidya, an iconic family planning and HIV/AIDS activist.

Initial Efforts to Reduce Mortality

In both developed and developing countries, the twentieth century has experienced a survival revolution that has been truly unprecedented in the history of humankind. Life expectancies at birth have increased dramatically (Wilmoth 2003: 654). These major advances were triggered by far-reaching socioeconomic improvements but also, occasionally, by important public health efforts. They were also accompanied by profound social and behavioral changes.

As mentioned in Chap. 2, life expectancies at birth, for both sexes, have increased globally between 1950 and 2000 from almost 47 years in 1950–1955 to more than 66 years by 2000–2005. Table 4.1 shows life expectancies (both sexes combined) for this period among the world major development groups and the major regions. In just one half century, the life expectancy at birth has increased worldwide by more than 42%. At regional level, however, the overall life expectancy has progressed at variable speeds. It has increased by a remarkable 64% in Asia, but only by 36% in Africa and 32% in sub-Saharan Africa (United Nations 2009d: 60).

A closer look at the evolution of life expectancy at birth for both sexes shows diverging patterns between developed and developing countries, as well as within these groups (Meslé and Vallin 2002: 533–534). In 1950–1955, most developing countries had an overall life expectancy at birth comprised between 35 and 45 years, far behind the developed countries' levels (65–70 years of life expectancy). Twenty years later in 1970–1975, richer countries had gained 5 years of life expectancy, with fairly homogeneous life expectancies across countries. On the contrary, life expectancies of developing countries had started to diverge, although a number of

Table 4.1 Expectancy of life at birth (both sexes combined) for the world, major development groups, and major areas, years 1950–1955 and 2000–2005

Major area	1950–1955	2000–2005
World	46.6	66.4
More developed regions	66.0	75.8
Less developed regions	41.0	64.4
Least developed countries	36.4	54.0
Africa	38.7	52.7
Asia	41.2	67.6
Europe	65.6	73.8
Latin America and the Caribbean	51.3	72.1
Northern America	68.8	78.4
Oceania	60.4	75.2

Source: United Nations (2009d): 48, 50, 52, 54, 62, 74, 84, 94, 102 & 104

developing countries experienced life expectancies similar to those of industrialized countries. In 1990–1995, most developing countries' life expectancies were regrouped in the 60–70 years bracket, closing in on the levels of developed countries, which themselves had gained another 5 years of life expectancy. Then, however, industrialized countries started to diverge: Russia and Eastern European countries had roughly the same life expectancy at birth as China. Among developing countries, sub-Saharan Africa continues to lag behind, and this situation has worsened with the advent of the HIV/AIDS epidemic.

In Western Europe and other industrialized countries, the reasons for such impressive progresses in reducing mortality levels remain a subject of debate. Were progresses achieved through socioeconomic gains (e.g., strides in agriculture and income growth), improvement in medical technology, public health interventions and the spread of scientific knowledge (World Bank 1993: 34–35), or even other, harder to identify societal changes? The British epidemiologist Thomas McKeown (1912–1988), studying the case of tuberculosis, asserted that standards of living and nutrition levels played a much more important role in bringing down mortality levels than either medicine or public health (McKeown 1976; Noymer 2003: 947). If taken as technical *instruments*, the medical discoveries of Edward Jenner (1749–1823), Louis Pasteur (1822–1895), Robert Koch (1843–1910), and Alexander Fleming (1881–1955) – and the adoption of the germ theory more generally – contributed undoubtedly to the overall reduction of mortality.[1] However, the *use* of such instruments was probably triggered, and their *effectiveness* enhanced, by a wide array of other factors, in addition to public health interventions. Among these factors were major improvements prior to World War II in sanitation and food processing (e.g., refrigeration technology, meat processing, and better regulations). As populations became more urbanized, access to safe water and sewage increased as well (this trend had started in developed countries in the second half of the nineteenth century). The widespread use of soap and easily washable clothing (e.g., cotton instead of wool) also improved personal hygiene. Finally, the economic growth experienced by developed countries, especially in Europe and Japan after World War II, raised both revenues and standards of living.

Increasing income allowed people, especially the poor, to buy more food and afford better housing and health care. However, higher income cannot explain all the gains in life expectancies (World Bank 1993: 34–35). Massimo Livi-Bacci (2007: 108) offers an interesting discussion of the various causative factors in the different phases of the mortality decline, although several factors probably worked in synergy at every stage. The first phase in the mortality decline, he contends, was triggered by social and cultural factors (e.g., methods of child rearing, personal hygiene, and improvements in the packaging and marketing of food). The second

[1] Before the 1930s, medical technology had few tools to combat infectious diseases, with the exception of smallpox inoculation and the diphtheria antitoxin, discovered in 1894. The situation changed significantly after the 1930s, with the availability of antibacterial drugs and new vaccines; see World Bank (1993): 35. At around the same time, Gehard Domagk (1895–1964) discovered the sulfonamides.

period saw the rise of economic performances as well as increasing income that helped to improve material life and infrastructure. Finally, medical, scientific, and behavioral factors came into play as well. Major mortality advances in developed countries were achieved in the late nineteenth and the first half of the twentieth centuries. However, after World War II, public authorities helped to accelerate the overall mortality decline with immunization programs targeted at specific diseases. Public hygiene and public information on health issues also improved markedly.

Nevertheless, it is difficult to measure with any degree of accuracy the role of public policies in these achievements. In this respect, an analysis conducted by the United Nations in preparation for the 1974 Bucharest International Conference on Population remained rather cautious. The study lists all key factors explaining the mortality decline in developed countries, namely economic development and rising income levels, sanitary reforms and public health measures, social reform, advances in medicine, and other "natural" (epidemiological) factors. Still, when it comes to policies, it appears that states' specific interventions in public health have been less effective than progress made in environmental sanitation (United Nations 1973: 146–152). Similarly, the seminal 1993 World Development Report "Investing in Health" suggests it is also not prudent to ascribe all the mortality gains to public health measures, as things started to improve only when people themselves began to understand the sources of poor health (World Bank 1993: 35).

Turning to developing countries, energetic and wide-scale exogenous interventions appear to have triggered more changes in mortality regimes than relatively slower processes of socioeconomic development. Before World War II, colonial powers as well as independent governments in Asia, Africa, and Latin America had adopted public health measures, launched disease vector control programs, and improved schooling, nutrition, and sanitation (e.g., water purification, drainage, and waste treatment). They had also organized targeted campaigns to bring down high mortality levels, most notably in urban areas.[2] These efforts have undoubtedly accelerated the epidemiological transition (World Bank 1993: 35).

The discoveries of Jenner, Pasteur, Koch, and Fleming, as already mentioned, helped to bring the survival revolution to territories of European settlement and other continents. In the 1950s, the wider distribution of antibiotics that had become available in the 1930s and 1940s helped cure conditions such as yaws in Africa and Haiti, and reduce the incidence of sexually transmitted infections and acute respiratory infections, although accurate statistics are not readily available (World Bank 1993: 35). Thanks to technical innovations, vaccines also became widely available in the 1950s and proved to be highly effective against infant and childhood mortality. The control of diseases vectors, through the elimination of mosquitoes' breeding sites, reduced the burden caused by malaria: this happened in the 1940s in Ceylon (renamed Sri Lanka in 1972). The incidence of yellow fever was brought down in a

[2] During the first part of the twentieth century, the developed countries had much higher mortality rates in urban than rural areas. The opposite occurred in the developing countries, where survival prospects were much worse in rural areas than in urban settings.

similar way. This was facilitated by the completion of major infrastructure projects, such as the Panama Canal (1914). The control of specific vectors also mitigated the scourge of *onchocerciasis* (also called river blindness, an illness transmitted by a small black-fly of the genus *Simulium*) and other diseases, such as *trypanosomiasis* (carried by the tsetse fly). Efforts to provide clean water and adequate sanitation reduced outbreaks of cholera. Chronic diarrhea, one of the main causes of deaths for under-five children in developing countries, was treated with intravenous injections of fluids, but the oral rehydration therapy (ORT) that would revolutionize the treatment against diarrhea appeared in the late 1970s.

Synergies between the different spheres of actions (for example, between public health and nutrition, with vitamin A and iodine supplements), were exploited as well. Overall, despite new threats such as the HIV/AIDS epidemic, all these interventions have had an important demographic impact (Garenne 1997: 237–269), and marked the beginning of international health policies. They were accompanied by a series of international conferences and initiatives that popularized the global health objectives and helped disseminate the know-how needed for their implementation.

Programs on Specific Diseases

Public health efforts geared at specific diseases brought about the successes in developing countries. Two different strategies are used to tackle specific diseases: control or eradication. The control strategy refers to "a public policy intervention that restricts the circulation of an infectious agent beyond the level that would result from spontaneous, individual behaviors to protect against infection" (Miller et al. 2006: 1164). Although disease control levels vary and are usually done for a specific country or region, they might have a global impact because control in one country or region may affect the situation in other countries or regions. Additionally, disease control requires permanent efforts and recurrent budgets.

Disease eradication became a possibility in 1796 when Jenner demonstrated how the use of a vaccine could provide immunization against smallpox. Contrary to control, eradication implies the "total absence of human cases, the absence of a reservoir for the organism in nature, and absolute containment of any infectious source" (Miller et al. 2006: 1165). Eradication is truly global since "a disease is either certified as eradicated or not" (Miller et al. 2006: 1165). Some authors also refer to the concept of elimination, which is location-specific and requires ongoing efforts. The related concept of extinction is the total disappearance of an organism, although this is actually impossible to prove (Miller et al. 2006: 1165).

The operational steps needed to achieve disease control and, to a larger extent, disease eradication are usually threefold: surveillance, including environmental sampling and clinical testing if needed; interventions, including vaccination and chemotherapy or chemoprophylaxis or both; and environmental controls and certification in the case of eradication (Miller et al. 2006: 1166–1167). Operational steps include, but are not limited to, disease surveillance systems, laboratory and clinical

infrastructure, information, education, and communication (IEC) campaigns, training of personnel, and supply chain logistics.

Programs against specific disease may be either vertical (i.e., solely devoted to one disease) or integrated (i.e., anchored in overall health systems). Vertical approaches generally pursue a single purpose and are carried out in a top-down manner. They imply centralized decision making, as well as ear-marked and reliable sources of funding. Integrated approaches, on the contrary, piggyback on existing health systems by expanding their initial mandate in order to address specific diseases or public health goals. Vertical disease control programs have long prevailed, from the end of World War II until the Alma-Ata Conference in 1978. At that conference, a comprehensive primary health-care strategy was launched, which relied on an integrated approach (Skolnik 2008: 274).

Different tools are available to control the various communicable diseases, and multiple tools may be used against one single disease. For instance, vaccinations are needed to combat poliomyelitis, measles, pediatric tuberculosis, diphtheria, pertussis (whooping cough), tetanus, hepatitis B, yellow fever, meningitis, and influenza. Nevertheless, other approaches are available as well. For example, vector control is used against malaria, yellow fever, *trypanosomiasis*, and *onchocerciasis*. But *onchocerciasis* also requires mass chemotherapy, as does hookworm (Guinea worm). Improved water supply, sanitation, and hygiene are interventions that help reduce the incidence of diarrhea. Other diseases (e.g., acute respiratory illness) can only be tackled through improved care seeking and case management (treatment), as well as improved care giving. Finally, other diseases, such as cholera and meningitis, require case surveillance, reporting, and containment. In addition, HIV/AIDS and sexually transmitted infections need behavioral change (Skolnik 2008: 188).

A large number of *ad hoc* programs were created after World War II to address specific communicable diseases. For instance, efforts were geared at tuberculosis, hepatitis B, trachoma, *onchocerciasis* (river blindness), and a host of other tropical diseases. Poliomyelitis is caused by the intestinal poliovirus, which enters through the nose or mouth, attacks the lymph nodes, and causes death, paralysis, or withered limbs. The disease had been fought successfully with vaccination in both industrialized and developing countries. Dr. Jonas Salk (1914–1995) discovered the inactivated polio vaccine in 1952 and introduced the injected polio vaccine in 1955. Dr. Albert Sabin (1906–1993) improved this first vaccine and licensed in 1963 an oral polio vaccine that was easier to administer, more efficient, and cheaper.

Mass polio immunization carried out between 1955 and 1961 led to a 90% decline of infections in the Western Hemisphere. A polio program was launched under the auspices of the Pan American Health Organization (PAHO) and geared at Latin America and the Caribbean. This was to be expanded in 1998 into the Global Polio Eradication Initiative, which benefitted from funding from several major countries (including India) and donors. The initiative was launched along the model of the smallpox program that will be discussed later (Skolnik 2008: 177). In 2007, the World Health Organization (WHO) declared polio eradicated in the Americas, Europe, and the Western Pacific. In 2010, there were only four countries with sustained transmission of polio (i.e., Afghanistan, India, Nigeria, and Pakistan), as

compared to 125 countries in 1988. Unfortunately, outbreaks in 16 other countries are "reminders that polio anywhere is a threat everywhere" (Bill and Melinda Gates Foundation 2011: 3 & 6).

Some international efforts to tackle specific diseases fell short of their ambitious goals, such as the initial international campaign against malaria (for a history of malaria, see Packard 2007). A disease caused by blood parasites transmitted by female anopheline mosquitoes, malaria has long been a leading cause of death throughout the world. Around 1850, well over a half of the world's population was at significant risk of infection. At that time, malaria's endemic areas included some temperate regions in Europe and the US, and much of the tropical world in Asia, India, China, Africa, and the Americas. Today, more than three billion people are at risk of contracting the disease. Malaria is responsible for an estimated 250m clinical cases reported each year and nearly one million deaths annually, mostly among children; since many deaths occur at home without being diagnosed, reported numbers likely underestimate the true burden of the disease. In low- and middle-income countries, malaria is the ninth leading cause of death, but the fourth cause of death among under-five children. Sub-Saharan Africa is particularly affected: children in that region account for 82% of the malaria deaths worldwide. In malaria-infected areas, pregnant women are at high risk of giving birth to low birth-weight children. Moreover, their fetuses are also at high risk of anemia and death (Skolnik 2008: 195).

For centuries, the only substance available to combat malaria and try to cure it was quinine, which was derived from the bark of the *Cinchona officinalis*, a tree native to South America. However, Ronald Ross' (1857–1932) discovery of the malaria agent and its method of transmission in the late nineteenth century opened the modern period of anti-malaria efforts, known as the "sanitation era". Environmental interventions focused on killing larvae of mosquitoes in their breeding sites and included swamp drainage, brush and grass cutting, and spraying of larvicidal oils. These interventions were generally accompanied by administration of prophylactic quinine and the screening of houses and beds (e.g., bed nets). In the 1930s, the discovery of synthetic anti-malarial drugs was added to the arsenal, making chemoprophylaxis a practical solution. Shortly after, in 1942, the discovery of the dichloro-diphenyl-trichloroethane (DDT) opened the possibility of global malaria eradication.

Soon after the discovery of DDT, aggressive anti-malaria programs were organized in different regions of the world. The campaign carried out in Sri Lanka in the 1940s with strong international support exemplified how impressive results were obtained, sometimes in a matter of months (Livi-Bacci 2007: 149). The campaign in Sri Lanka involved spraying insecticide from the air, which was complemented by large-scale sanitary measures including the distribution of quinine and mosquito nets (World Bank 1993: 35). The campaign's overall demographic impact on mortality was difficult to measure because of the fluctuations in the data caused by a previous malaria epidemic in 1935 and the economic crisis of 1942–1944 (Garenne 1997: 246). Nevertheless, it appears that the crude death rate on the island fell from 21.5 per 1,000 in 1945 to 12.4 in 1950, with almost one-quarter of that

decline linked to the sole malaria eradication campaign (World Bank 1993: 35). Moreover, for the period between 1946 and 1960, the malaria eradication campaign was probably responsible for 27–43% of the drop in mortality (depending on the model used), although analysis at district level is more delicate (Garenne 1997: 246).

The eradication efforts of the 1950s and 1960s aimed to completely interrupt the transmission of malaria. Widespread and systematic control measures such as indoor residual spraying with DDT, the elimination of mosquito breeding sites, the use of bed nets, and mass treatment with cheap anti-malarial drugs resulted in unprecedented declines in malaria-related mortality and morbidity. Yet, despite initial success, the huge costs of the campaign and the advent of anti-malarial drug resistance in the 1960s convinced the World Health Assembly (WHA) of the World Health Organization (WHO)[3] to revise its strategy in 1969. The WHA reverted to malaria control programs, because total malaria eradication efforts appeared to be out of reach and unsustainable in resource-poor environments (Arrow et al. 2004). During the 1970s and 1980s, there was little progress in the fight against malaria and a renewed two- or three-fold surge in malaria cases occurred globally.

In the early 1970s, malaria still remained one of the most widespread and common communicable diseases of the developing world. Ecological considerations have also led to the abandonment of DDT, although new attempts are being made to use it again with caution. Spots of resistance to chemoprophylaxis and chemotherapy have reappeared and the dilapidation of health systems, particularly in sub-Saharan Africa, has led to the resurgence of the disease. To sum up, quick gains were thought to be achievable through the use of a fairly simple technology, i.e., the DDT. This led policymakers to abandon the fairly sophisticated science of malaria control that had been patiently built over several decades (Miller et al. 2006: 1163). Malaria remained almost as lethal as it was in past centuries, and possibly became more infectious because of the apparition of new forms of resistance. The dream of global malaria eradication appears to have failed despite the decrease in the number of malaria cases in recent years and the availability of new technologies, including drugs (e.g., artemisinin), the widespread use of impregnated bed nets, and progress on the development of a vaccine (Bill and Melinda Gates Foundation 2011: 13; Packard 2007: 228–230).

A brighter counterpoint to the relative failure to tackle malaria is the campaign against smallpox, the only example of an international disease eradication effort that was successful. In 1966, smallpox, an acute contagious disease caused by a poxvirus, affected perhaps 15m people in 50 countries around the world, accounting for two million deaths annually. Smallpox kills about one-third of those infected and survivors often suffer deep, pitted scars, and sometimes blindness. The vaccine against smallpox had been developed at the end of the eighteenth century, but could only be mass-produced and stored without refrigeration in the 1950s. Another breakthrough

[3] The WHO was established in 1948 and has currently 193 member states and two associate members.

was the invention of the bifurcated needle, allowing reuse after sterilization and requiring a much smaller amount of vaccine per patient (Skolnik 2008: 12).

In 1959, the WHA unanimously adopted a resolution to eradicate smallpox through compulsory vaccination (a similar resolution had been proposed as early as 1953, but did not muster much support because some countries felt that the technology available at the time did not measure up to the task). However, for a number of years the smallpox eradication campaign suffered from lack of funding. The program became viable in 1965 when the US stepped in with technical and financial support (Skolnik 2008: 12). A Smallpox Eradication Unit was established at the WHO and headed by Dr. D.A. Henderson of the Centers for Disease Control and Prevention (CDC) in Atlanta. All WHO member countries were required to report smallpox cases and administer program funds effectively. In addition, the WHA encouraged research on smallpox. The program remained also sufficiently flexible to allow for local conditions to guide implementation on the ground. In this respect, the Smallpox Eradication Unit introduced innovative new methods to mitigate setbacks caused by wars and civil strife. Overall, the organization of the program proved to be quite efficient.

The last endemic case of smallpox in the world was recorded in 1977 in Somalia. After 2 years of surveillance and searching, the WHO declared victory in 1980 (today vaccination against smallpox is no longer mandatory). Smallpox was the first disease to be eradicated in the history of humankind. This spectacular success was the result of a rigorously coordinated worldwide effort, conducted under the leadership of the WHO, an effort which was truly unprecedented in the history of public health.

The success against smallpox can be explained by three main factors, the first of them being specific to that disease. Indeed, smallpox was a prime candidate for such an eradication effort because it is passed directly between people, with no vector (and there is no reservoir). In addition, the diagnosis of the disease is easy (distinct rash, skin eruption with pustules, sloughing, and scar formation), and survivors gain lifetime immunity. Furthermore, the severity of smallpox symptoms forces patients to take to their beds, therefore infecting few others (Skolnik 2008: 11–13). Second, a strong political commitment arose to launch the fight against the disease and then, later, to sustain it with adequate funding. Sound leadership was evident throughout, and exemplified by the close partnership between the WHO and the CDC. The eradication campaign took a 20-year-long effort by the WHO and its partners. Third, the intervention itself, i.e., the implementation of the smallpox eradication campaign, was in many ways exemplary. The program was conducted in a military-like manner, although flexibility allowed national programs to adapt global eradication efforts to their specific needs. The organization of such a worldwide program was quite a feat in an age that did not have access to electronic communication. Overall, this triumph in public health continues to inspire efforts against other diseases (Skolnik 2008: 11–13), although no other candidate has yet been singled out for another eradication campaign of such a large scale. However, the WHO was quite successful in its fight against the severe acute respiratory syndrome (SARS) in 2003 (Samarasekera 2008: 1151).

The undeniable victory against smallpox has perhaps led to strategic errors later; HIV/AIDS springs immediately to mind. The epidemic quickly proved impervious to methods used to eradicate smallpox, under which individuals are considered targets of public health interventions. Today, HIV/AIDS is recognized not only as a transmitted disease, but also as a social and behavioral issue. The solution appears to be dependent on responses from individuals, their families, and the community, which are all rooted in a specific environment. The poor status and poverty levels of women, a consequence and a cause of the disease, also need to be taken into account. The fight against the epidemic must be multi-sectoral. Controlling the epidemic calls for a reexamination of the old public health paradigms and requires a stronger commitment of individuals, families, and communities, supported by all stakeholders (UNAIDS 2000).

The Expanded Program of Immunization

Vaccines are essential tools in the eradication, control, and prevention of diseases. The success obtained against smallpox in 1977 was essentially attributable to the availability of a vaccine that was discovered nearly 150 years prior to the eradication campaign, but became mass-produced cheaply and, consequently, could be administered on a large scale. Later, other vaccines became available to protect against several diseases, including diphtheria and rabies vaccines, which were discovered in the late nineteenth century. Another string of new vaccines became available in the twentieth century: in the 1930s for pertussis,[4] in the next decade for the yellow fever, in the 1950s for poliomyelitis and, finally, in the 1960s for measles. Nowadays, vaccines are also available for tetanus, meningitis, hepatitis and other diseases such as plague and cholera and the various forms of influenza (flu). However, some of these vaccines are not very effective (e.g., the cholera vaccine).

Subsequently, expanded immunization programs were organized and launched on a large scale. Vaccines have been used systematically in the context of the Expanded Programme on Immunization (EPI) established since 1974 by the WHA of the WHO. The program was reinforced later with the help of the United Nations Children's Fund (UNICEF). The EPI was designed to protect children in the first year of their lives against six major diseases: diphtheria, pertussis, tetanus,[5] plus measles, tuberculosis, and poliomyelitis.[6] The program administers basic vaccine doses to children and, when necessary, their boosters, following well established schedules.

The first goal of the EPI was to protect children and enhance their survival prospects with the target to cover all under-five children by 1990. In targeted countries, the aim was to make sure that 80% of children in 80% of the districts of

[4] The Bacille Calmette-Guérin (BCG) vaccine against tuberculosis also appeared at that time.

[5] The round of the first three vaccines is called DPT.

[6] Regarding polio, the EPI relied on the new vaccine that had been designed by Dr. Sabin.

the country would receive the 3rd immunization for diphtheria, pertussis, and tetanus (this is considered a benchmark of good immunization coverage; see Skolnik 2008: 180). The second goal of the EPI was to strengthen the countries' self-reliance in the delivery of immunization service within the context of the overall health services. This led in many countries to the reinforcement of their health infrastructure (Levine and What Works Working Group 2007: 35).

Indeed, most vaccinations are given in health clinics or health centers. They are integrated into regular maternal and child-health services, and are part of primary health care. However, public health authorities also organize outreach campaigns to vaccinate populations against specific diseases. Outreach workers may bring vaccines to households and remote areas. Vaccines can also be sold in pharmacies and administered by local doctors or nurses.

The overall success of the EPI has been impressive. In 1974, 5% of children in developing countries were immunized against the six diseases. By 1991, 83% of children in the same areas received three doses of DPT vaccines, and 85% received the polio vaccine (Levine and What Works Working Group 2007: 35). Nevertheless, vaccine coverage varies greatly with the education level of the mother of the child, as well as with the income of the family. Moreover the poorest people, who need vaccines most, are still not properly covered in many places (Skolnik 2008: 180).

Every year, the EPI mobilizes most developing countries and their international development partners. The specialized agencies of the United Nations, in particular WHO and UNICEF, support these campaigns. The EPI also mobilizes a diverse coalition of philanthropic organizations such as Rotary International, which since 1985 has provided funds to buy polio vaccines under its PolioPlus initiative. Indeed, the EPI calls for large budgets and requires a considerable deployment of logistical and technical means (usually, four rounds of vaccinations are organized every year).[7] Among other things, it is essential to set up and maintain a cold chain to prevent vaccine spoilage. It is also necessary to establish transport systems across entire countries, not to mention the need to address issues of programs' management, supply-chain logistics, and monitoring and evaluation functions (Goodfield 1991).

In many countries, the EPI has also benefited from very visible political support. In sub-Saharan Africa, it was not uncommon to see Presidents themselves receiving their vaccine doses in public, e.g., against meningitis, as a way to reach out to their populations (such high level support is much harder to muster for family planning campaigns). Finally, although the progress of the EPI's efforts is easily measured by looking at the levels of vaccine coverage obtained through the Demographic and Health Surveys (DHS), the demographic impact of vaccination campaigns is still relatively unknown, except when it pertains to vaccines against measles and tetanus (Garenne 1997: 249).

[7] Today, the GAVI Alliance, formerly the Global Alliance for Vaccines and Immunisation (GAVI), which was launched in 2000, aims at achieving the Millennium Development Goal (MDG) pertaining to child mortality (MDG Target 4a).

Vanguard Family Planning Programs

In developing countries, curbing high levels of mortality was obtained essentially through the wide-scale use of exogenous medical techniques. The rapid decline of mortality brought an acceleration of the rate of population growth. However, the decrease of mortality also triggered subsequent reductions in fertility, observed at micro-level (Cleland 2003: 669–671). Enhanced child survival prospects strengthened the rationale for fertility reduction and couples gradually internalized the need to limit their family size, since more children survived.

These new developments highlighted the need for public authorities to address the issue of high fertility as well, and several countries started to provide family planning services. In the late 1940s, Japan became the first country to enact fertility regulation measures, but the rationale was in large part eugenic. In 1952, India was the first country to adopt a national population policy, with the goal of reducing fertility levels. However, the India program was marred later by human right abuses. In the period 1960–1962, Pakistan, the Republic of Korea (South Korea), Egypt, and Fiji also established family planning programs.[8] Other developing countries launched family planning programs (and adopted population policies) in the late 1960s and early 1970s (Tsui 2001: 185). These efforts were spearheaded by the *Population Movement* (see later in this chapter). Thereafter, the global family planning revolution gradually reached most parts of the developing world (Robinson and Ross 2007b).

These early experiences with population policies and family planning programs adopted different approaches, and raised some concerns. The policy of Japan was largely dominated by eugenics and abortion. Top-down approach, coercion, and target-setting prevailed for some years in India. The case of Egypt points to the tardiness of the policy, on the one hand, but also to the synergy between family planning and socioeconomic development, on the other. As such, these experiences and their shortcomings will come to shape the international debate on population and family planning (and later on reproductive rights) over the next several decades.

Japan shifted from a pronatalist[9] to an anti-natalist policy in 1948. At that time, Japan had no sovereign government; beginning of 1945, the country was administered by the US, with General Douglas McArthur (1880–1964) serving as Supreme Commander of the Allied Powers (SCAP). All Japanese laws were to be approved by the SCAP, which points to the American influence regarding the origin of the anti-natalist policy and several of the laws passed between 1948 and 1952 (Oakley 1978: 624–636).[10]

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[8] After World War II, these countries were categorized as developing countries, but Japan has since experienced a rapid economic expansion.

[9] Pronatalism (opposed to anti-natalism) aims to increase only the native population, while populationism attempts to increase the population through any means, i.e., native births and/or immigration.

[10] However, earlier historians of the Allied Occupation of Japan do not mention the American influence on Japanese anti-natalist laws; see, for example, Taeubner (1958: 380–390) and Eiji (2002: 431–432).

Before the adoption of an anti-natalist stance, however, Japanese policies toward population issues during the decades preceding World War II had evolved in opposite directions, moving from favorable attitudes to family planning to a strong pronatalist push.

The Japanese political context of the 1920s was rather liberal and this period saw the activities of the first family planners such as doctors, lawyers, and eugenicists. The Japanese family planning movement also drew to its rank feminists and labor union activists (Norgren 2001: 25).[11] Margaret Sanger (1879–1966), the American birth control activist, visited Japan often around that time.

This window of opportunity for family planning activities closed up in the 1930s after the military coup (1932) and the onset of the Pacific War. The Japanese military leadership wished to encourage population growth and endorsed a pronatalist policy. Family planning champions whose views conflicted with official policy were unable to sustain their movement. Most forms of contraception were banned, birth control clinics were shut down, and activists like Ishimoto (later Katō) Shizue (1897–2001), who was called the Japanese Margaret Sanger, were even jailed.

Things opened up again after the Japanese military defeat and during the subsequent Allied Occupation. Massive bombing had shattered Japan's industrial base, and nearly two million Japanese soldiers and populations from Japanese colonies were being repatriated (Kitaoka 1957: 43–56). Authorities were concerned about overpopulation because only 13% of the archipelago is cultivable. Some members of the Japanese elite came to view eugenics as one way to improve the quality of the race and increase the country's chance for survival in the midst of the competition between great powers (Norgren 2001: 36–37).

A powerful lobby of doctors was able to advance the cause of abortion, to some extent as a way to promote the organizational and financial interests of the group. The proposed abortion law was hotly debated, however, and doctors and women opposed religious groups that were against the law. Eventually, policymakers supported the law, because they believed that legalizing abortion was the best way to lower population growth, which in turn would facilitate Japan's goal of economic recovery.

The Eugenic Protection Law passed by the Japanese Diet in 1948 legalized the use of induced abortion in order to protect the life and health of mothers. A key rationale of the new law was eugenic (Takeda 2005: 166–175), as it intended to prevent the birth of malformed children, allowed sterilization, and permitted abortion under certain circumstances (e.g., rape, leprosy, and hereditary illness; see Coleman 1983: 19).[12] Abortion became even more readily available following substantial revisions to the 1948 law in 1949 and 1952. The 1949 revision made Japan the first country

[11] It was during this period that Kyusaku Ogino (1882–1975), a Japanese physician, and Hermann Knaus (1892–1970), an Austrian physician, discovered independently the connection between ovulation and menstruation. This led eventually to the Ogino-Knaus contraceptive method, which is based on the observation of the ovarian cycle.

[12] The law was revised much later, in 1996, and renamed the Maternal Protection Law in response to the critiques of human rights champions, feminists, and advocates of the disabled.

in the world to allow the termination of pregnancy on socioeconomic grounds. The 1952 revision eliminated the requirement that women appear before a committee to seek permission to have an abortion (Norgren 2001: 48). With respect to abortion, Japan was more liberal than many developed countries at the time.[13] It is interesting to note that despite high abortion rates, maternal mortality remained rather low in Japan, contrary to the situation of other countries (e.g., in Eastern Europe), that had also legalized abortion.

The new Japanese legislation on abortion was accompanied by a Pharmaceutical Affairs Law, also passed in 1948, that repealed all previous laws restricting the sale and distribution of contraceptives. Both abortion and contraceptive services were subsidized under the national health plan (Hodgson 2009: 495–497). The provision of family planning services was accompanied by strong neo-Malthusian propaganda. A Council on Population Problems was established in 1953 and popularized family planning methods (Kitaoka 1957: 43–56). The new policy of the government was relayed by numerous private associations that provided family planning services. The use of contraceptives, mostly condoms, rose rapidly but spread faster in the cities and more slowly in the countryside. The hormonal pill, however, was opposed for almost four decades, essentially by the powerful obstetrician-gynaecologists of the designated abortion providers group (Coleman 1983: 37–38). Medical lobbies first promoted access to abortion and then slowed down the approval of the hormonal pill to maintain their advantages as abortion providers.[14]

The family planning program triggered a decline in fertility in only a decade, which proves the effectiveness of the policy. The total fertility rate was estimated at 4.4 children per woman in 1948, reached 2.0 by 1957, and remained at replacement level until 1973 (Hodgson 2009: 497; Takeda 2005: 208). Nevertheless, the country had to absorb the population growth caused by the demographic dynamism of the pre-World War II period, which caused temporary migratory tensions toward cities and a rise in the population pressure on cramped lands. According to the United Nations, Japan had a population of 82.8m in 1950 and its population reached 126.7m just a half century later (United Nations 2009d: 292).

The Japanese paradox is that the post-World War II abortion policy has been very progressive, while the contraception policy has been rather conservative, in particular with respect to the hormonal pill (Coleman 1983: 7–9). Japan's contradictory policies are puzzling since it seems illogical for a government to encourage relatively more expensive abortion over a fairly low cost and especially low risk contraceptive method (Norgren 2001: 3). Some authors have stressed the cultural and religious basis for acceptance of abortion, because the Japanese traditionally practised

[13] Most other countries did not legalize abortion until several decades later. Even in countries that did allow induced abortion to save a woman's life or protect her health, the procedure was by no means readily available.

[14] The hormonal pill was only approved in 1999 by the Japanese Ministry of Health and Welfare. At that time, Japan was the only member of the United Nations that had not approved the pill for contraceptive use.

abortion and infanticide. But other authors have argued that Japanese abortion and contraceptive policy was more the product of politics than culture. In fact, very different historical circumstances and, in particular, various interest groups' configurations and dynamics had led to these divergent outcomes (Norgren 2001: 9). In sum, the Japanese experience illustrates the importance of powerful lobbies in shaping population policies.

In 1952, India joined the small group of countries seeking to modify their demographic evolution, and was the first country to adopt an official policy to slow down population growth. In the beginning of the 1950s, the country was experiencing accelerated population growth caused by declining death rates and high birth rates, a situation shared by many developing countries during that period.

Policy interventions were spelled out in the country's first Five-Year Plan (1951–1956), and the policy lever adopted was the expansion of contraceptive services through the creation of family planning centers. The first step was to establish family planning clinics with the expectation that people would visit them on their own. But the goal of reducing birth rates through family planning was hampered both by deep-seated traditions that favored larger families and the enormous challenge of bringing services to a huge, very diverse, and largely rural population.

The family planning program spread only to certain states and to cities, and among privileged social classes. India's total fertility rate (TFR) was estimated at 5.9 children per woman in 1950–1955 (United Nations 2009d: 276). The coastal states of the South (e.g., Kerala) were open to change and experienced rapid fertility declines. On the contrary, the more conservative and very densely populated states in the North (the Hindi-belt and the Indo-Ganges plain) experienced demographic change at a much slower pace.

In the second Five-Year Plan (1956–1961), family planning expenditures increased and services were incorporated into community-based development programs. The government's concern about the country's population growth was heightened in the 1970s when successive censuses showed that population growth rate was still rising, despite policies and investments in family planning. The fifth Five-Year Plan of 1971–1976 proposed to reach a crude birth rate of 25 per 1,000 (this rate was actually ten points higher than planned during the first half of the 1980s; see United Nations 2009d: 276).

Concerns about rapid population growth set the stage for the family planning program's most controversial period. This took place during the National Emergency declared in 1975 by Prime Minister Indira Gandhi (1917–1984, Prime Minister from 1966 to 1977 and again from 1980 until her assassination in 1984). During the Emergency Period, many states adopted coercive measures along with a quota system that resulted in the establishment of sterilization camps (in principle, sterilization were performed only after the third child). In 1976–1977, 8.3m sterilizations, mostly vasectomies, were performed, up from 2.7m the year before. This approach was a resounding failure. The abuses and negative publicity generated by the Emergency Period compromised the reputation of the government's family planning program, and family planning services were suspended. It also created a political backlash that led to the Congress Party's defeat in the elections of March 1977.

As Matthew Connelly put it, the Emergency Period "has become emblematic of everything that can go wrong in a program premised on "population control" rather than on reproductive rights and health" (Connelly 2006: 629).

After the debacle of 1977, successive Indian governments have been careful to stress the voluntary nature of the family planning programs (Harkavy and Roy 2007: 303–305). Later in 1996, following the 1994 International Conference on Population and Development (ICPD) held in Cairo, the government announced a new population policy, which eliminated numerical targets for new contraceptive acceptors (Donaldson 2002: 97). However, that practice has not been adhered to uniformly throughout the country, and family planning incentives and disincentives still exist in some states (e.g., Andhra Pradesh). Overall, India's TFR was estimated at 2.8 children per woman in 2005–2010 (United Nations 2009d: 276).

The abuses of India's family planning program and other examples of coercion (e.g., in China and, more recently, in Latin America) have led the way to the revision of demographically-driven policies and programs. As noted above, this shift in policy approach came to bear 20 years later at the 1994 ICPD, which emphasized reproductive rights globally. Today, these rights are the most important foundation of population policies and family planning programs.

Indeed, population policies in Egypt have shown that family planning programs "work best when they are voluntary and noncoercive", as stressed by Robinson and El-Zanaty (2007: 29); see also Jain (1998). In the mid-1950s, Egypt joined the countries seeking to address the issue of rapid population growth through a deliberate population policy. Before World War II, dramatic improvements in public health programs triggered an important decline of mortality and led to rapid population growth. The TFR was estimated at 6.4 children per woman in 1950–1955 (United Nations 2009d: 220). Egypt was a classic case of population explosion threatening to outstrip the country's limited resource base.

However, the establishment of the Egyptian population program was long in the making, and it could be argued that the country reacted quite late to its demographic challenge. Initial efforts toward designing a population policy were lukewarm and cautious, as they sparked strong responses from conservative groups, even though religious opinions on the matter were mixed. Still, the country's first President, Gamal Abdel Nasser (1918–1970, President from 1956 until his death in 1970), approved of population limits (which scholars had been presenting as early as the mid-1930s). In 1954, a Committee on Population Affairs was established to look at the various social, medical, and economic implications of population growth. The next year, eight experimental family planning clinics were created by NGOs. However, the positive political atmosphere regarding population policy turned sour around the second half of the 1950s, as the policy was viewed as being negative and too Western. This precluded the launch of an official government population program at that point (Robinson and El-Zanaty 2007: 17–18).

The Governmental Committee on Population Affairs was initially established in 1954 and was transformed into a non-governmental organization (NGO) in

1961, under a new name: the Egyptian Family Planning Association. This arrangement enabled some form of population program to emerge. In 1961, President Nasser's government endorsed the use of family planning to slow down population growth. This was followed by the creation of a Supreme Council of Family Planning in 1965, placed under the authority of the Prime Minister. This Council was changed in 1973 into a Population and Family Planning Board.

It was only in 1966 that the Egyptian family planning program started on the ground. By mandate, the country created a nationwide service-delivery program overnight, although none of the key elements, i.e., strong day-to-day leadership, staff training, logistical development (e.g., commodities), information and education campaigns, were in place or even addressed. The result was a poorly-led, badly-managed, ill-supplied, and under-financed effort to distribute pills using an untrained staff and inadequate existing health facilities, both operating on a part-time basis. More fundamentally, ambivalence at top levels of government was also part of the reason for the failure, which has been dubbed "an objective without a policy" (Ibrahim and Ibrahim 1998: 23–24). After some initial success with both the pill and the intra-uterine device (IUD), the program's achievements leveled off and even declined for a short period. By 1973, only two pill acceptors per month, on average, were recorded by typical family planning clinics and only one IUD acceptor per month in those clinics doing IUD insertions. The program never reached more than a fraction of the potential clients, and staff became dispirited and apathetic about undertaking any new initiatives (Robinson and El-Zanaty 2006: 49–50). This was called the phase of "a policy without objectives" (Ibrahim and Ibrahim 1998: 24).

The program was redesigned in the 1980s and finally became a policy with clear objectives (Ibrahim and Ibrahim 1998: 24–25). A new three-pronged strategy was adopted, namely the straightforward delivery of contraceptive services as a part of the public health system, the promotion of overall economic and social development goals (forerunners of demographic change), and the empowerment of women through education, employment, and increased legal rights (gender-based approach). Therefore, the program exploited the synergies to be found by combining expanded family planning services delivery along with major socioeconomic improvements.

Better leadership and organization helped the program, and so did the participation of the private sector, the introduction of targeted mass media programs, the availability of more contraceptive methods, and an improvement in the quality of services. The new strategy led to many positive changes, including increasing levels of health and education, expanded availability of economic and social infrastructure, and changes in women's labor force activity, legal status, and in-household gender role. This was associated eventually with a decline in fertility and family size (Robinson and El-Zanaty 2006: 84–91). Egypt's TFR was estimated at 3.9 children per woman in 1990–1995 (United Nations 2009d: 220). Thereafter, the program was consolidated and scaled up in the 1990s (Ibrahim and Ibrahim 1998: 25). Nowadays, the TFR has reached the level of 3.0 (Population Reference Bureau

2010a). However, it has been argued that the socioeconomic and institutional setting of Egypt will make it difficult to obtain rapidly a further decline of the TFR (Ambrosetti 2011: 60–62).

Expansion of Family Planning Efforts

Several other countries, such as Pakistan, the Republic of Korea (South Korea), Fiji, and China, had launched family planning programs in the early 1960s. However, the global expansion of family planning programs occurred in the 1970s, with the exception of sub-Saharan Africa (only Ghana, Kenya, and South Africa had meaningful programs at the time). This period can be considered to be the peak of family planning efforts in developing countries.

In the 1970s, the World Bank granted loans for population projects, and significant development aid funds were specifically earmarked for family planning assistance by the US Congress. A decision was also made to establish a UN body focused on population issues (today's United Nations Population Fund; see Chap. 5, section "New Population Institutions"). These elements illustrate the extensive international efforts to slow down population growth in developing countries (Sinding 2007: 5). One of the key international population conferences also took place during this period, in Bucharest in 1974. It was a turning point in the global approach to population policy as many developing countries expressed their frustration, discontent, and even opposition to the "population control" approach, which was perceived as a tool of the US, international donors, and the "West" more generally. The developing countries present in Bucharest also stressed the importance of broader socioeconomic development to foster their demographic transition. This led to a *World Population Plan of Action*, a document that balanced the need for voluntary family planning programs and other development efforts (Sinding 2007: 7; see also Chap. 5, section "World Population Conferences").

Global fertility and contraceptive use levels shifted dramatically between the mid-1960s and mid-1990s, decreasing from six to three children per woman and increasing from 10% to 60%, respectively (Sinding 2007: 7). Very successful family planning programs were implemented in Asia (e.g., in South Korea). From this, the family planning revolution spread to the rest of the world, including some poor countries, but not to the LDCs. Despite initial resistance, family planning programs in Latin America started on a large scale in the early 1970s. Programs were either sponsored by the state (e.g., Mexico), or launched through private sector initiatives (as in Colombia and Brazil). Some large countries, such as Indonesia, achieved remarkable successes in the supply of family planning services. Programs in small island-countries usually obtained rapid fertility declines (e.g., Mauritius and also, after overcoming initial obstacles, Sri Lanka; see Wright 2007). Although some countries experienced problems with their family planning endeavors, such as Pakistan, Ghana, and Kenya, they were still able to significantly decrease fertility

levels and even reduce those levels by half in the cases of Pakistan and Kenya (Sinding 2007: 8).

Successes of family planning programs in the 1960s and 1970s are well captured in the recent volume edited by Robinson and Ross (2007a) that tells the story of programs' achievements through the words of the experts and stakeholders.[15] Eventually, the family planning revolution spread throughout the developing world, including the Islamic countries (e.g., Iran), and was fostered by the international family planning movement.

Focus: The Population Movement

The roots of the birth control movement, which go back to the nineteenth century, can be found in Western Europe, mostly Great Britain, and in the US. The movement's "principal aim was to grant to individuals, but especially women, control over their own reproduction" (Sinding 2003: 363). The movement grew rapidly in the 1920s and was led in Great Britain by Marie Stopes (1880–1958), who opened London's first family planning clinic in 1921. In the US, the iconic figure was Margaret Sanger, a professional nurse and pioneer of family planning (she coined the expression birth control). In 1916, following the death of a friend after a botched clandestine abortion, Sanger opened the first family planning clinic in Brooklyn (it came up against strong opposition and was quickly closed). She also founded the American Birth Control League in 1921. Initially, the birth control movement was closely associated with the feminist movement (Donaldson 1990; Donaldson and Tsui 1990; Harkavy 1995; Kantner and Kantner 2006; Sinding 2007).

The international family planning movement *per se* took off in 1952 with a meeting in Bombay, India, that brought together the heads of eight family planning associations from Western Europe and Asia (the Federal Republic of Germany, Hong Kong, India, the Netherlands, Singapore, Sweden, the United Kingdom, and the US). The result was the creation of the International Planned Parenthood Federation (IPPF), based in London. The purpose of the new NGO was to spread family planning information and technology (Sinding 2003: 363).

Sometimes called the *Population Movement*, this international effort started when natural population growth rates increased considerably, leading to fear that rapid population growth had become unmanageable unless vigorous action was taken to bring down high fertility levels. India had identified population growth as a national problem and had enacted the first population policy in 1952. Several other Asian countries followed suit, such as Taiwan, South Korea, Hong Kong, Pakistan, and Singapore. By the end of the 1960s, most South and East Asian countries had established national population programs (Sinding 2003: 364).

Three different intellectual strands coalesced into the international family planning movement (Sinding 2003: 364). First, in the footsteps of Malthus were professionals motivated by concerns about rapid population growth and its detrimental consequences for socioeconomic wellbeing. They were also wary about the potential political instability that

[15] The chapters cover 23 countries, namely Egypt, Iran, Tunisia, Morocco, Turkey, Chile, Colombia, Guatemala, Jamaica, Korea, Hong Kong, Singapore, Thailand, Indonesia, Malaysia, Philippines, India, Bangladesh and Pakistan (covered together), Sri Lanka, Nepal, Ghana, and Kenya. A chapter on Taiwan was also prepared, but not published.

is sometimes linked to fast growing populations. The second group was the eugenicists, mostly active before World War II, who believed that the alleged dysgenic effects of fertility differentials could be linked to low contraceptive use among the lower classes. Finally, the lion's share of the movement was composed of "family planners". They wanted to bring the benefits of family planning to as many people as possible in order for them to take charge of their own lives (the concept of empowerment as applied to reproductive rights came about later, at around the time of the 1994 ICPD).

What made the P*opulation Movement* so visible, and in a sense so powerful, was that it captured the dominant ideas of the time, namely the progress of science and importance of individual freedom. In addition, it had a large and diverse funding base. The Population Council was created in New York in 1952. In 1958, Sweden became the first country to provide international family planning assistance, with a grant to Sri Lanka and later in other countries, such as India and Pakistan. Other European donors started to fund population projects, providing money to the International Planned Parenthood Federation (IPPF) and sometimes directly to governments.

A major breakthrough came in the late 1960s with the full involvement of the US. In his inaugural address in 1950, the US's 33rd President Harry S. Truman (1884–1972, President from 1945 to 1953) announced his famous Four Point Program. The first three points called for support to the United Nations, the financing of the Marshall Plan for Europe, and military support to fight communism. The fourth point called for economic and technical assistance for developing countries. This was actually the origin of the bilateral American cooperation, which later became the US Agency for International Development (USAID). However, it was not until the 1960s that priority was given to social programs, including family planning (with the first financing awarded by the US Congress in 1968). The very large amounts of US funding channeled through USAID enabled to launch comprehensive family planning programs around the world (for instance, the family planning program in Tunisia).

In 1969, the US bilateral commitment was reinforced by the creation of the United Nations Fund for Population Activities (UNFPA), known since as the United Nations Population Fund. During this time, the development banks also started to fund population programs. The World Bank approved its first population loan in 1970, to support Jamaica's family planning program. Several powerful and well-organized US foundations also joined the movement. Among the most important are (in alphabetical order) the Ford, Bill & Melinda Gates, Hewlett, Mellon, Packard, Pew, Rockefeller, and Turner foundations (Specter 2005), as well as the Wellcome Trust in Great Britain. These institutions have funded family planning programs, while at the same time spreading population interventionist ideas through conferences, publications, and journals. These foundations hire population specialists to backstop their projects and have considerable sums of money at their disposal. More recently, these foundations were required to step up their support to family planning when support of the American government eroded in Congress, due to pressures from the Republican majority and the Christian Coalition lobby following the controversy surrounding abortion (Donaldson 1990). Incidentally, it is interesting to note that most international funding for family planning comes from Protestant countries (in Europe and the US), as well as Japan. Today, most of the pledges to UNFPA come from the same countries. The main exception is the US, which has occasionally suspended its contributions to UNPFA over its alleged support to abortion in China.

In sum, the international family planning movement brought a global family planning revolution to developing countries, one of the most remarkable public health advances of the twentieth century. This could not have been achieved so quickly and remarkably without the funding of the US, many European donors, and Japan.

Despite these successes, however, the family planning revolution is not yet completed. Many developing countries still are in the midst of their fertility transitions, whilst most sub-Saharan countries still are lagging behind or at incipient

stages. Contraceptive prevalence is particularly low in Western and, particularly, Central Africa (Guengant and May 2002: 77), where French non-interventionist attitudes vis-à-vis population issues still exist. In most Francophone sub-Saharan countries, the French 1920 Law repressing abortion and contraception remained in place long after their independence. In these countries, the gap in contraceptive use between urban and rural areas also remains important.

Components of Family Planning Programs

Family planning programs are large-scale endeavors that encompass many dimensions, including program design, information, education and communication (IEC) and behavior change communication (BCC) campaigns, service provider training, construction of health infrastructure (clinics and/or health centers), contraceptive logistics (supply-chain for commodities), mobilization of financing, and monitoring and evaluation (M&E) activities.

It is essential to strike an adequate balance between the supply of services and the creation of demand for contraceptives (Phillips and Ross 1992: 59–77). Demand creation is an important and strategic element of effective family planning programs. In fact, the mere supply of services may fail to attract users, if the demand for services is not important. Conversely, it may be unwise to create greater demand and an expectation of contraceptives when services are not readily available. In practice, demand creation tends to refer to outreach programs, mass media campaigns, and IEC and BCC campaigns. The objective of such efforts is to inform the public of family planning options and available services, and to encourage the use of contraceptives. Another objective is long-term social transformation, by making smaller families more desirable and/or encouraging later marriage and pregnancies.

M&E is also a crucial dimension, which requires analyzing the supply of services according to cost/benefits criteria and deciding on the method mix (the choice of methods to be offered). The method mix, in turn, has implications for outcomes (some methods are more efficient) and funding (some methods are more expensive). It might also be necessary to explore alternative contraceptive distribution strategies such as mobile clinics, community-based distribution, over-the-counter sales in pharmacies, and/or social marketing techniques. Market segmentation is useful to identify and target potential users as well as providers. Health information systems and other quantitative and/or qualitative data gathering techniques are needed to evaluate the programs *ex post*. Finally, quality operational research activities can feed the new information gained from the results back into the programs.

The main task of family planning programs is to overcome numerous and diverse barriers in order to deliver contraceptive services. These barriers to fertility regulation have been identified by Campbell and colleagues (2006). They encompass lack of access (mostly in rural areas), method choice, financial costs, the poor status of women and their lack of autonomy, medical barriers, providers' biases, side effects, misinformation and fear, and the lack of access to abortion when it is legal.

In this respect, a key ingredient of many family planning programs is the political leadership and the strong commitment of individuals. In his book *How to Change the World: Social Entrepreneurs and the Power of New Ideas*, David Bornstein (2007) demonstrates how committed individuals can, and actually do, change the world. With respect to family planning programs, this does not only occur at highest levels of leadership (e.g., a President who publicly supports the program), but also and perhaps more importantly at level of programs' organization and implementation. The world is full of dedicated, committed and at times heroic professionals and activists who have the stamina and courage to overcome barriers and bring social change.[16] For example, in his promotion of family planning, Mechai Viravaidya or Thailand's "Condom King" is a truly iconic champion of the cause.

Focus: Mechai Viravaidya, Activist Par Excellence

Mechai Viravaidya was born in 1941 from a Thai father and a Scottish mother. His parents, who were both physicians, espoused great humanitarian ideals and they bestowed these values on their four children. In 1954, Mechai Viravaidya was sent to study economics in Australia. Upon his return to Thailand in 1965, he worked as a development economist in a government agency and "he could see that overpopulation was the greatest impediment to Thailand's development" (D'Agnes 2001: 148). During the same period, Mechai, as he was widely known, became a celebrity throughout Thailand. He wrote newspaper columns about development, was a radio announcer and a television actor. He also worked in theater and taught English at the Tammasat University of Bangkok. In the process, he gained an in-depth knowledge of the Thai society, as well as exceptional communication skills (Bristol 2008: 109).

In the early 1970s, his main interest was family planning and he organized the delivery of family planning information and services using village volunteers (non-clinical distribution of hormonal oral contraceptives). According to D'Agnes, Mechai's biographer, "he set out on a campaign to desensitize taboo attitudes about condoms and was so successful, with a humorous approach, that condoms in Thailand became widely known as *mechais*" (D'Agnes 2001: 14). He used unorthodox methods to popularize condoms, enlisting police officers to distribute them at traffic lights in big cities, disrupting diplomatic cocktails to sensitize the upper class, and using humorous slogans such as "a condom a day keeps the pregnancy away" or "condoms are weapons of mass protection".

In 1974, he founded his own non-governmental organization to promote family planning, which later became known as the Population and Community Development Association (PDA). As his program grew, he began to integrate community development activities with his family planning efforts (D'Agnes 2001: 232). In 25 years, PDA implemented 134 projects with funding from 70 donor agencies and became the vehicle to pursue a new vision of development. PDA's projects covered many areas such as family planning, appropriate technology transfer, refugee relief and education programs, environmental protection, HIV/AIDS control, business development, and, more recently, the use of micro-credit and a focus on youth. His methods were often unconventional but always entertaining and, more importantly, quite effective. His main objective remained

[16] A series of oral histories of population and reproductive health professionals and activists can be found at http://www.smith.edu/library/libs/ssc/prh/prh-narrators.html, accessed on November 17, 2010.

the socioeconomic development of the Thai people. He saw family planning and population management as a means to an end. Recently, Mechai expanded his activities to new areas, such as combating human trafficking and promoting natural disasters relief efforts, although his endeavor to reinvent himself and his work has sometimes proven strenuous (Bristol 2008: 109).

When HIV/AIDS emerged in the 1980s and 1990s, Mechai was one of the first in Thailand to understand that it would become a major problem and he tried to overcome the government's indifference and silence. In 1987, he used PDA to launch a campaign to educate people about AIDS. He launched additional HIV/AIDS programs, and he was eventually assigned responsibility for the national program on AIDS. As a result, Thailand became one of the first countries in the world to see a decrease in the transmission of HIV. The national organization structure and the strong support from the top echelons in the government have since been presented as a replicable model for effective national responses elsewhere.

Between 1974 and 1981, Mechai's work with PDA was interrupted by occasional stints of service in the public sector. Among other appointments, he was Chairman of the Advisory Committee on AIDS to the Prime Minister and Minister in the Prime Minister's Office in charge of AIDS Prevention. He also received many international awards, including the United Nations Population Award in 1997 and the Gates Award for Public Health in 2007, and became a Senator in 2000.

Throughout his career, a few paramount principles guided Mechai's work, namely to raise awareness through education and public relations, stress individual responsibility, and seek participation and ownership by the local people as the ultimate stakeholders. Many people have dedicated their lives to the poor with equally impressive results, but what is unique about Mechai are his methods, which were "out-of-the-box". Sometimes he shocked the establishment, but he often made people laugh. He was not risk adverse and took chances if he thought it was necessary, even when such moves put him at personal risk.

In many ways, Mechai has become the social conscience of Thailand (D'Agnes 2001: 394). Unfortunately, no successor appears to be able to continue his work with the same charisma and vision. It is a challenge to summarize Mechai's life. His late friend Henry P. David (1923–2009) stated it most simply when he said: "Mechai's life is a wonderful example of what can be accomplished by one man with imagination, good humor, and strong motivation" (D'Agnes 2001: 397).

Overall, family planning programs need strong organizational capacities, especially in their implementation, financial resources mobilization, infrastructure building, and service provision. Their implementation requires consistency and determination because results are usually only measured after several years or even decades of important and costly inputs. Another dimension is the decentralization of health services, which might negatively impact family planning programs, as documented in the Philippines (Lakshminarayanan 2003: 104–105).

In addition to the supply vs. demand dimensions, a strategic choice must be made for the provision of family planning services between the public sector (Mexico's case) and the private sector (as is the situation of Brazil). As discussed earlier, a fundamental issue is the choice between a vertical program (family planning services are offered independently from other medical services) and an integrated program (services are made available with other health interventions, e.g., maternal and child-care services). Originally, family planning programs were organized vertically. However, the current approach is to integrate reproductive health services in health programs. In 1961, for instance, Tunisia chose a vertical program and achieved rapid results (Tunisia also promoted female education, banned polygamy, and legalized abortion). Later, however, Tunisia integrated

family planning into primary health care. In contrast, Morocco opted to start with an integrated program. However, it is not easy to determine the efficiency of the different strategies (vertical or integrated and public or private), as much depends on the country's specific context and its political economy with respect to population and family planning issues.

Conclusion

The first public health and population interventions addressed the issues of high mortality and high fertility levels. In developed countries, reductions in mortality levels were obtained gradually through broad-based socioeconomic improvements that were occasionally accompanied by public health interventions. In developing countries, on the contrary, mortality declines were triggered by exogenous techniques such as sanitation campaigns, programs aimed at specific diseases, and the expanded program of immunization.

Couples, first on their own and then with governments' support, adjusted to declining mortality levels through fertility reductions. Vanguard countries such as Japan, India, and later Egypt enacted fertility reduction measures and/or offered family planning services. These efforts evolved rapidly into well organized family planning programs, which were led by governments with support of private sector actors. The *Population Movement*, which impacted policies and programs in developing countries, fostered these efforts. The global family planning revolution had started to spread around the world, with the exception of the least developed countries and sub-Saharan Africa.

The next step in the development of world population policies will be the internationalization of the population concerns and debate. This will be addressed in the following chapter.

Chapter 5
Internationalization of Population Issues

We are in the midst of a great transition
from narrow nationalism to international partnership.

Lyndon B. Johnson (1908–1973)
US 36th President (1963–1969)

Rather pragmatic considerations, i.e., to reduce high levels of mortality and particularly fertility, led to the first modern population programs. It could be argued that these interventions, which were implemented after World War II, were the result of a kind of *de facto* consensus in favor of such global endeavors. At the time, both mortality and fertility levels were deemed to be too high in developing countries. Curbing fertility levels was considered important and urgent, because it was assumed that such a reduction would improve socioeconomic outcomes.

Following the population programs' initial successes, however, the debate on population issues and their relationships with socioeconomic development became more contentious. In the early 1970s, policymakers and public leaders started to question the importance of the population variable in socioeconomic development. Sharp dissensions also appeared between the population and family planning community, on the one hand, and the supporters of broader socioeconomic development approaches, on the other. Increasingly, population issues became the object of an international debate, exacerbating ongoing political and ideological discussions both domestically and abroad.

The emergence of population and development institutions, such as the International Planned Parenthood Federation (IPPF), the US Agency for International Development (USAID), and the United Nations Population Fund (UNFPA) embodied the internationalization of population issues. This process culminated with the organization of three major world population conferences, conducted under the auspices of the United Nations. These conferences were held in 1974 in Bucharest, in 1984 in Mexico, and in 1994 in Cairo. Such large-scale and media-covered events helped popularize themes and issues pertaining to population and family planning and later, reproductive rights among policymakers, the press, and the general public.

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_5,

The polarization of the debate between the proponents of socioeconomic development and the promoters of family planning occurred at the Bucharest Conference in 1974, where the opposition theme was "development is the best contraceptive". In Mexico, in 1984, the US challenged the importance of the population factor for socioeconomic development and advocated the promotion of the private sector to foster economic growth. Finally, the 1994 International Conference on Population and Development (ICPD) moved "away from top-down approaches and pre-planned demographic goals" (Singh 2009: 1). Delegates in Cairo adopted the concept of reproductive rights, as the attention shifted from global programs to limit fertility to the reproductive rights and concerns for each person.

This chapter begins by covering the international population paradigms. It uses an existing framework to analyze the evolution of population policies and interventions since the 1960s, and illustrates this with the example of Colombia. The chapter then describes the creation of population and family planning institutions in the 1960s and 1970s, as well as the support to, and funding of, population and family planning activities by governmental agencies, multilateral, and bilateral donors (with a case study of France). Then the chapter turns to the outcomes of the three major world population conferences.

The 1994 ICPD markedly modified the population policy debate. However, the preceding decade (i.e., the period following the 1984 Mexico Conference) was marked, especially in the US, by the economists' dismissal of the issue of population growth, the controversy surrounding induced abortion, a resurgence of socially conservative values, and the assertion of feminist views on socioeconomic development. These factors continued to play out in the aftermath of the ICPD. The ideological battle over abortion rights in the US jeopardized international funding for population and reproductive health programs worldwide. In addition, the post-Cairo period also witnessed the rapid emergence of the HIV/AIDS epidemic, a major challenge to public health and economic development.

In 2000, the adoption of the Millennium Development Goals (MDGs) helped reframe the international development agenda. The MDGs initially failed to include a specific goal for reproductive health issues, but this gap was later addressed with additional indicators pertaining to reproductive health. All these developments were accompanied by major strides in the collection of demographic data, which ushered in improvements in the international monitoring of population trends and policies. Finally, the widespread availability of population projections also helped enhance population policy discussions (a focus on India closes the chapter).

International Population Paradigms

The efforts made by states and the international community to address population issues cannot be separated from international population paradigms. These paradigms can be defined as predominant ideas on population issues (at the time) and their relationship with socioeconomic development. It should be stressed that

these ideas are far from homogeneous and change over time. They are promoted by a rather diverse number of constituencies and groups such as countries, governments, non-governmental organizations (NGOs), international agencies, and private lobbies. However, many of these groups disagree on issues as fundamental as the perceived economic and social consequences of population growth, the desirable degree of intervention by governments, linkages between population and other sector policies, organizational arrangements for the implementation of population policies, and the amount of resources to be devoted to population interventions (Finkle and Crane 1990: 167).

Finkle and Crane established a typology of the international paradigms on population. For the period between 1965 and 1990, they identified three essential phases. Before reviewing them, one should keep in mind that the design and implementation of international population policies has long been dominated by governments and international organizations. The gradual weakening of the dominant US influence over approaches to global economic and social issues in the 1970s and 1980s led to the emergence of a number of groups with diverse ideological standpoints that would come to shape policies. In this process, transnational policy coalitions emerged as significant actors that were central to the formulation of population policies. Their strength manifested as high level of consistency and harmonized leadership, which enabled them to design policy strategies. Additionally, they had considerable potential to share new ideas among governments and to create new organizations. However, some obstacles remained since coalitions could be inbred, resist change, and be selective with the information utilized. Overall, the dominance of Western elites and ideologies still determined policy approaches. These conveyed policy ideas and knowledge from North to South, although developing countries claimed more experience and knowledge of their own population issues.

The first *population control approach* period (1965–1974) identified by Finkle and Crane promoted population policies geared at reductions of fertility levels through family planning programs, as a means to improve socioeconomic outcomes in developing countries. The intellectual shaping of this approach was provided by two international conferences in 1965 (Geneva, organized by the Population Council, and Belgrade, organized by the United Nations). These meetings were not conducted by governments, but gathered scholars, activists, population experts, and policymakers who personified the emergence of a growing coalition stressing population growth as a critical issue. A central tenet of this approach was to introduce government-led family planning programs. As the still dominant power in global politics, the US played a key role in the development of these population policies. While following its long-term aspirations of stability and integration of the Third World into the global economy, the US acted through international organizations and some bilateral assistance programs. By the 1970s, new international programs were set up with US backing, further facilitating meaningful US leadership. Evolutions in US policy in 1965 (as it moved away from a "hands off" attitude) legitimized population as a policy subject.

All this led to a major international campaign, which emerged from the transnational coalition of the 1950s, devoted to reducing population growth. The coalition was composed of three major entities: the Planned Parenthood movement

(which benefited from significant US fund-raising), demographers and social scientists (especially associated to US universities and international bodies), and philanthropists and private foundations (most often based in the US). They garnered knowledge, initial funding, and a vision for population and family planning. Even though there was growing adherence worldwide, the force of the coalition was the US, with the Population Council and other organizations[1] as well as the mobilization of key politicians versed in foreign policy.

Two core ideas unified the coalition. First, rapid population growth was perceived as too fast to be sustained, menacing stability and quality of life at domestic and global levels. Second, there was extensive confidence in large-scale family planning programs as a viable and cost-effective policy. These ideas were implemented successfully in countries like Singapore in the 1950s and early 1960s, where the government subsidized clinic-based services with information, education, mass media, large-scale immunization, and disease eradication programs. Convictions in the family planning approach were based on liberal assumptions of women's motivation for family planning and rooted in the belief that the availability of new knowledge and information would bring the necessary behavior change. Yet the coalition failed to appreciate the socioeconomic role of children in non-Western societies. The notion of urgency in decreasing fertility levels also caused the dismissal of the integration of population programs into health services. Instead, the coalition advocated for public and private sector organizations to spread family planning rapidly and efficiently (most often in the form of "vertical" programs).

In spite of some skepticism, such policies were adopted by countries and incorporated by international organizations (visible with the growing number of population agencies), which increasingly created distinct population programs. By 1975, 77% of the population in developing countries was covered by population growth reduction policies. In spite of short-term advantages of family planning programs, barriers between the population and development programs existed. However, difficulties were crystallized in trends that appeared by the 1970s. In particular, service-oriented programs were not reducing fertility in many poor countries. The appeal of the population control strategy was limited in Latin America and Africa, and negative reactions appeared against the implementation of the programs. Soon, a new transnational population planning coalition would coalesce, with a new approach facilitated by the emergent role of multilateral organizations (Finkle and Crane 1990: 169–172).

This second period, the *population planning approach* (1974–1981), was marked by new directions in policies that surfaced at the Bucharest Conference in 1974. This approach echoed the positions of the Group of 77, inspired by socialist countries

[1] The Population Crisis Committee (PCC), created in 1965, played a key role under the leadership of the Major-General William H. Draper, Jr. (1894–1974). The PCC helped get international family planning programs started. It was also most influential in the creation of key population institutions, like UNFPA, and helped establish an Office of Population within USAID. It also raised private funds for the IPPF.

such as the former USSR and China. The goal was to achieve fertility declines through broader development plans that attempted to establish quantified economic and social objectives for countries and their geographic and administrative subdivisions. Such plans focused on adaptive responses to the effects of population growth, essentially by promoting economic growth and social development. Rapid population growth challenged public authorities to integrate demographic variables directly into development plans, for example in education, labor force, and urbanization sectors (Stamper 1977).

In the 1970s, the general conviction was that progress could be made through planned economies and social change with public and private financing. Additionally, the US was losing international influence because of the Vietnam War, the monetary weakness, and the oil crisis. In response, the US strengthened its dedication to international organizations and started new ones, with aid shifting to tackle more explicitly basic needs and poverty alleviation. Due to a better appreciation of trends, population policy civil servants on the national and international level were the most influential element of the new population planning coalition. The new approach, originating from European and developing countries, as well as universities and organizations in the US, was disconnected from the population control coalition, while still being concerned with rapid population growth. The population planning vision emphasized the leading role of governments (as opposed to private actors) in motivating people to practice family planning, in line with a belief in development progress. This new approach offered a more comprehensive understanding of complexities as well as concerns of the effects of poverty and risks for maternal and child health in developing countries.

In Bucharest, after extensive debate, developing countries subscribed to the World Population Plan of Action (WPPA), which stressed the importance of social and economic change as a solution to population problems. The WPPA committed to a more integrative approach for population and other development strategies. It also outlined measures governments could take to reach demographic goals, such as the reduction of birth rates, infant and child mortality rates, the empowerment of women, and better income distribution. At international level, developing countries gained considerable power in international organizations while being aware of implications and risks of rapid population growth. After Bucharest, new initiatives were launched by donor agencies, some of which were based on more integration (e.g., multi-sector projects of the World Bank). International agencies assisted governments to create special population units to develop technical expertise in demography and population policy. Governments, for their part, attempted to design and implement multi-sector integration, rural development programs, or income generation for women along with family planning components.

Most of the skepticism directed toward this coalition came from those who still committed to the population control perspective and its specific policies and programs. Interests in existing arrangements and aims of family planning programs caused resistance, especially within USAID. In fact, USAID continued to pursue its support for national family planning programs stressing “vertical” service delivery, instead of the new multifaceted demand-oriented approach proposed by the new

coalition. Yet, in the 1970s, it was clear that the "all family planning" approach was not going to be successful in some countries (e.g., India and Pakistan), as it was not able to rapidly reduce fertility rates. The criticisms related mostly to the costs, complexity, and lack of attention to both the needs of clients and the quality of family planning services.

New ideological forces questioned the ethical basis of such population programs, which increased demands on population planners to improve the priorities and obtain broader support. However, development plans were quickly overtaken by the speed of population growth, making population planning less efficient. In addition, the classic opposition between capitalists and socialists, which dominated discussions in Bucharest, was becoming less relevant. Socialist policies of autonomous development and import substitution, that were hostile to family planning (these were widespread in Latin America and to some extent in sub-Saharan Africa), achieved poor results. In contrast, liberal policies based on private initiative, international commerce, and foreign investments that were more accepting of family planning (with subsidized commodities), achieved great successes in East Asia (Finkle and Crane 1990: 172–175).

Focus: Changing Attitudes Toward Population Issues in Colombia

Colombia offers a good example of the integration of population variables into the development planning process during the 1970s. Colombia's experience also illustrates the process of transition between the different population policy paradigms, as identified by Finkle and Crane (1990).

By the 1950s and the 1960s, many countries in Latin America experienced population growth rates of 3% per year (among the highest in the world) and, from 1951 to 1964, Colombia had an even higher annual population growth rate. In 1973, it was the fourth most populous country in Latin America with a population of 22.7m (Measham and Lopez-Escobar 2007: 121). Today, Colombia has a population of 45.5m (mid-2010 estimate) and is a medium-size country by world standards (Population Reference Bureau 2010a).

In the late 1960s, the prominent actors on the Colombian population policy scene were the Office of the President, the Ministry of Health, the Catholic hierarchy, ASCOFAME (*Asociación Colombiana de Facultades de Medicina*), and PROFAMILIA (*Asociación Probienestar de la Familia Colombiana*). In 1964, ASCOFAME established its Division of Population Studies and laid the groundwork for the efforts to mitigate rapid population growth by "training physicians and supporting pilot family planning efforts by its medical school members" (Measham and Lopez-Escobar 2007: 124).

Fertility and health surveys carried out by ASCOFAME demonstrated the need and demand for family planning services. PROFAMILIA was established in 1965 and quickly opened family planning clinics in major cities. ASCOFAME put into place the building blocks through its programs of health personnel training. However, as PROFAMILIA offered high-quality family planning services, the Ministry of Health played a more cautious role. These efforts to establish more effective population growth mitigation were jeopardized when the Holy See issued the encyclical *Humanae Vitae* in July 1968 (see Chap. 7, *Focus: Roman Catholic Views on Modern Contraception*). In addition, the contract between the Ministry of Health and ASCOFAME expired and was only renewed in 1969. In 1969, the Ministry of Health started to provide family planning services through the Maternal and Child Health Program (Measham and Lopez-Escobar 2007: 124–125).

Carlos Lleras Restrepo (1908–1994, President from 1966 to 1970) played a key role in the process of developing a comprehensive population policy. Apart from simply implementing family planning programs, he was aware of the impact of rapid population growth on social sectors, including housing and employment. In 1968, a shift from population control policies to the population planning approach seemed to be crystallizing, as the National Planning Department was required "to study the population phenomenon and its economic and social repercussions" (Ott 1977: 5). Nevertheless, Colombian leadership encountered resistance in the development of its population policy. Many actors did not view the issues of economic growth, population density, and the inability to provide social services to growing cohorts as salient problems. The obstacles lay in nationalism, pronatalist cultural norms and traditions, Marxist political movements, bureaucratic rigidities, shortage of trained health personnel, and inadequate government infrastructure in rural areas (Measham and Lopez-Escobar 2007: 122–123).

Despite these obstacles, Colombia was still leading population policy efforts in the Latin American context. In contrast to its neighbors, the country made great efforts to take into account the impact of demographic trends on its development program and also tried to link its population policy with its development planning. Colombia's population policy had two main goals: to slow down urbanization and reduce fertility. By improving conditions in secondary cities, the government hoped to retain inhabitants close to the rural areas, reducing the stress on major urban areas caused by high rural-urban migration. Albeit not explicitly stated, the plan included family planning measures that were part of the overall development project. The development plan (*Plan de Desarrollo Económico y Social 1970–1973*) included population-planning objectives that were to raise education levels by developing greater parental responsibility, to make objective and sufficient information on family and sex life available, to provide access to the necessary medical services, and to create equal opportunities for women in the job market by encouraging later marriage. In fact, the 1973 census data showed that fertility levels had declined. In 1975, the Minister of Health stressed that a rapid rate of population growth was an impediment to development. The government became one of the principal providers of family planning services. The integrated population planning approach created the appropriate environment for the reduction of population growth and helped improve development outcomes (Stamper 1977: 208–210).

In the 1970s, the stage was being set for the third phase of population policies, the competitive pluralism in population policy approach, which would come in the 1980s with the arrival of active external agencies. The Ford Foundation, the Population Council, the Pan American Health Organization (PAHO), and USAID provided technical advisers to Colombia (Measham and Lopez-Escobar 2007: 131). In 1973 and 1974, external agencies approved USD5m for 5-year family planning projects. The International Planned Parenthood Federation (IPPF), PAHO, and USAID were the primary donors. Each donor had specific objectives and channeled funds accordingly. The IPPF assistance went to PROFAMILIA, PAHO assistance went to the Ministry of Health, and the funding from USAID supported major programs. There were other smaller donors present as well, and they too had their own set of goals with regard to family planning. As a result, the environment for a pluralistic approach to population planning began in earnest. Strong leadership, motivation, and willingness to change were all key ingredients in addressing rapid population growth. In sum, the collaboration of the government, academic organizations, and private sector family planning initiatives was propitious to set the population policy wheels in motion.

The third period identified by Finkle and Crane, the *competitive pluralism in population policy approaches*, covers the period 1981–1994. Several groups challenged the positions held by the two previous coalitions and noticeably they had a greater impact on policy deliberations. This was discernible with the enactment of several new principles. First, less importance was given to modernization and social

change as a prerequisite for fertility reduction. There was also considerable skepticism of cash incentives[2] for family planning acceptors, e.g., sterilization, which had been used in some family planning programs (see, for instance, Cleland and Mauldin 1991). Second, respect for local values and cultural traditions were firmly established. Third, there was a drive for decentralization, participatory policy making, strategies geared at program users, and community participation to the detriment of centralized governmental activities. Finally, NGOs, private voluntary associations, and profit-making enterprises were all perceived as meaningful actors (the period was marked by the arrival of numerous new NGOs that specialized in population and reproductive health). These new principles competed with earlier development principles of planning orientation and the basic-needs approach that prevailed in the 1970s. The new ideas became more important during the population conference held in Mexico City in 1984. The Mexico Conference moved away from quantitative population growth targets, and suggested that countries should instead pursue "relevant demographic policies".

In the 1980s, consensus statements on population issues were an adjustment by the population planning coalition to the more heterogeneous political environment. The US had still less influence and remained in a weaker international position with more internal division on what priorities should be. Divisions were also evident among major actors in developing countries with weak state intervention, the collapse of the non-aligned movement, and increased economic and demographic inequalities experienced in these countries. This reinforced the reliance on consensus building in order to seek stronger support.

At international level, the dominant principle was that policy formulation and coordination were the independent responsibility of each government. In fact, due to the large number of transnational actors nearly all conflicts were likely to rise at country level. These forces could be beneficial, like in the case of Brazil, if governments incorporated diverse perspectives in decision-making processes and included the information obtained in order to be more responsive to local populations. On the contrary, these forces could be also negative with only short-term benefits. In addition, the lack of broad-based support could create unproductive programs and policies, as experienced in sub-Saharan African countries.

Policy disagreements in developing countries were aggravated by rising transnational networks and coalitions (noticeably with efforts to launch specific agendas such as primary health care, women's empowerment, and right-for-life movements). Additionally, increasingly shared perceptions coalesced with the organization of international conferences. Better communication, the use of mass media, and the creation of new journals (and later the Internet) enabled networks to work hand in hand. These networks had the potential to enhance understanding of family regulation, convey information, and facilitate access to services because they

[2] Later, such cash incentives would be banned by some agencies, e.g., USAID, as being coercive. Even monetary incentives for family planning providers would be prohibited, for instance under Results-Based Financing (RBF) schemes.

reached the grass-roots level. However, the cooperation between various networks (mostly health professionals, women's groups, and right-to-life activists) was far from easy. For instance, the population planning coalition attempted to work directly with the networks in the 1980s, although in practice they continued to operate on their own ground (Finkle and Crane 1990: 175–178).

The 1994 ICPD embraced the concept of reproductive rights and stressed the importance of individual concerns. However, it also suffered from fierce ideological confrontations. As such, the Cairo Conference marked a new shift in the development of international population paradigms. The section "New Developments and Old Controversies" later in this chapter will explain the unforeseen consequences of the Conference, in particular the inadvertent de-emphasizing of demographic issues. In recent years, issues of population and reproductive rights regained some visibility, in particular with respect to the situation in the 49 LDCs.

Although Finkle and Crane issued their analysis in 1990, the last period they identified can safely be extended until the 1994 ICPD. The aftermath of Cairo is still playing out. However, the accession of US 44th President Barack Obama on January 20, 2009 has rekindled international public interest into family planning efforts, as several observers had anticipated (Gillespie et al. 2009; Speidel et al. 2009a).

New Population Institutions

Institutions dealing with population issues can be grouped in national and international agencies (including the population institutions of the United Nations), professional associations, and research institutions (Caldwell 2003b; Chamie 2003; Haaga 2003; MacDonald 2003). Also important are the institutions whose mandate is the education of the general public, such as the Population Reference Bureau (PRB), and advocacy groups like Population Action International (PAI), formerly known as Population Crisis Committee (PCC). Some institutions fulfill several roles, for instance undertaking research and implementing programs.

In the 1950s, and especially during the 1960s and the 1970s, many governments in developing countries created national institutions to tackle population and family planning issues. The institutional choice at the time was between creating free-standing population administrations and loading existing governmental departments with additional population-related tasks. Sometimes, a dual approach prevailed: strategic functions of population programs were attached to the Ministry of Planning, whilst health aspects of these programs (e.g., the delivery of family planning services) were given to the Ministry of Health. Many countries established national population councils to coordinate population activities. Nevertheless, administrative arrangements were variable, depending on the administrative culture of the country and the historical (e.g., colonial) experience.

The countries that decided to set up free-standing population institutions usually opted for "vertical" family planning programs. These were anchored either in Population offices (like Tunisia; see Brown 2007) or, more commonly, in the

Ministry of Health. Several countries, on the contrary, decided to promote integrated family planning programs, where services were part and parcel of a broader package of health services. Some countries started with "vertical" programs and shifted later to integrated services, such as Haiti (often with poor results; see Allman et al. 1987). Still, other countries opted for a hybrid system, where family planning services were to be delivered by the department in charge of health, whereas another ministry (e.g., Ministry of Planning) was given the task to design strategies and conduct advocacy and information campaigns. In Latin America, the private sector occasionally supplemented the efforts of public authorities, as exemplified by Colombia (Measham and Lopez-Escobar 2007). Generally, the responsibility of census and survey data collection and analysis was given to national institutes of statistics, albeit occasionally to the Ministry of Planning (planning functions were sometimes entrusted to the Ministry of Finance and Economy).

In addition to these country-level efforts, a vast network of international agencies concerned with, or specializing in, population and family planning issues appeared after World War II. In 1946, the Economic and Social Council of the United Nations established the Population Commission, with a Population Division serving as its Secretariat. This inter-governmental body advises the Council on population-related issues, trends, and development strategies. It meets every year and is an important forum for countries to communicate about their policies and progress. Following the 1994 ICPD in Cairo, the Population Commission was renamed the Commission on Population and Development, at which point it acquired a key role in monitoring and assessing the implementation of the ICPD Programme of Action.

Within a few decades, the topics of population and family planning had truly become international issues, partly due to the initial impulse of what was called the *Population Movement* in the US (see Chap. 4, *Focus: The Population Movement*). Since the World Health Organization (WHO) had been initially reluctant to embark on large-scale family planning programs,[3] a new specialized UN agency, the United Nations Population Fund (UNFPA) was created in 1967 and began operations in 1969,[4] with the view of promoting population and family planning interventions worldwide. Specialized United Nations agencies, e.g., the International Labour Organization (ILO), the World Bank, and several regional development banks also became involved in population programs.

These efforts were complemented by important bilateral funding and technical contributions, particularly from USAID, Japan, and several European countries, including Nordic countries, the United Kingdom, The Netherlands, and Germany (France's late involvement is noteworthy). Among the most important European

[3] However, the WHO Department of Reproductive Health and Research and its longstanding Human Reproduction Program currently carry out important work in the area of contraceptive research and normative guidance for family planning and reproductive health programs.

[4] Initially, UNFPA was set up as a division of the United Nations Development Programme (UNDP) and managed by the UNDP Governing Council. The first name of UNFPA was United Nations Fund for Population Activities.

bilateral donors, one should mention the Nordic countries, the UK Department for International Development (DFID), and the German *Gesellschaft für Technische Zusammenarbeit* (GTZ)[5] that all generously contributed to population and family planning programs. Finally, Japan's efforts, both multilateral and bilateral, have also been important, even if they often relied on third parties (e.g., multilateral institutions) for implementation.

The work of these multilateral and bilateral international organizations is in turn complemented by the programs of a myriad of NGOs funded by a mix of public and private money. Among these NGOs, the most important is the IPPF, which was founded by eight national family planning associations in 1952 in London. IPPF currently has member-associations in more than 140 countries. Numerous and very influential American institutions also deserve a special mention. They encompass NGOs, scientific organizations, professional networks, women's coalitions, and foundations. For example, the Bill and Melinda Gates Foundation works in the areas of health, immunization (e.g., polio vaccine), HIV/AIDS programs, reproductive health, and urban poverty. These institutions enjoy a semi-autonomous status, although they have to answer to their boards and/or donors. However, the proliferation of such organizations has inevitably contributed to the fragmentation of efforts and programs in the area of population and reproductive health.

While some agencies, e.g., USAID, have been really focused on family planning issues (when enabled to do so by the US Administration), others institutions or countries have neglected this area altogether. It is interesting to note that in 2008 eight predominantly Protestant European countries made up more than 75% of the regular contributions to UNFPA (USD424m). Together with Japan, these countries covered more than 80% of the organization's regular budget (in 2008, the US had not resumed its funding to UNFPA). The predominantly Catholic European countries (Austria, Belgium, France, Ireland, Luxembourg, Spain, and Italy) financed about 10% of UNFPA's regular budget (UNFPA 2009a: 27). This highlights the relatively low level of funding of international population programs on the part of some large countries, such as France.

Focus: France's New Strides in International Population Programs

The French school of demography has a long and well-reputed history. As early as the eighteenth century, it distinguished itself by its contribution to the Physiocratic movement (a group of economists that sought to promote agriculture). More recently, French researchers designed innovative data collection and analytical techniques, as well as pioneering studies in the area of historical demography. Moreover, with its *Institut national d'études démographiques* (INED), created in 1945, France has one of the largest centers for demographic research in the world.

Despite all these achievements, France did not support right away the international population programs, which had started in earnest in the 1960s. The significant weight that France carries on the international scene was not being used to address rapid population

[5] GTZ was renamed *Gesellschaft für Internationale Zusammenarbeit* (GIZ) in January 2011.

growth issues. This was particularly true in francophone sub-Saharan Africa, where France could have made a difference given its historical involvement (whereas France promoted family planning programs in its own overseas departments and territories). Furthermore, France's pioneering work on demographic data collection in developing countries has been eclipsed during the last decades by efforts of international organizations and bilateral cooperation agencies such as Germany, Britain, Canada, and particularly the US. Major data collection endeavors such as the Demographic and Health Surveys (DHS) have been funded almost entirely by the US.

One explanation for this state of affairs is probably the lack of a "social engineering" culture in Europe and even more so in France. European researchers are reluctant to match scientific analysis with programmatic actions. They analyze brilliantly, but are shy to explain. Above all, they loathe suggesting interventions. In addition, the Northern American origin of the *Population Movement* reinforced the misgivings of the French scientists. They were reluctant to adopt a cause they considered to be essentially Anglo-Saxon. Other factors also came into play: the low priority given to population and family planning programs within public aid policies, the scarcity of financial resources, the interest of French researchers in other aspects of development such as education and social development, and the language barrier (this has radically changed since). All these factors explain the lack of engagement of France in international population programs.

However, the climate surrounding population questions has now markedly changed in France, as warranted by the creation in 1993 in Paris of the lobbying and advocacy group *Équilibres & Populations*. This NGO was created by physicians both convinced of the importance of demographic variables for development and committed to bring France into the mainstream. *Équilibres & Populations* has been very successful. By engaging French politicians, parliamentarians, and health policymakers, it has managed to reposition population and reproductive health issues within the French public discourse on development.

France has many assets that should help reinvigorate its participation in international population efforts. Among these, one should mention the interdisciplinary approach favored by French researchers. French research teams are also of a high quality, even if their work is often fragmented and poorly coordinated. A new generation of French population scientists could bring about needed change, provided they are given sufficient financial and political support (in this respect, the dazzling success of the "French doctors", the humanitarian medical aid activists, is worth mentioning). Basic health, including reproductive rights, is France's priority for its development assistance policy. Following the 1994 ICPD, it has increased its financial contribution to UNFPA. France is now funding reproductive health experts posted in multilateral organizations such as UNFPA, World Health Organization (WHO), and UNICEF. The French Development Agency (AFD) is also committed to addressing population issues. In 2007, France's weight in the World Bank (in conjunction with other European chairs on the Board) has helped support the population and reproductive rights agenda when it was under threat within the Bank. Overall and assuming that the renewed commitment will be matched by increased funding levels, France could play a significant role in the international population programs, particularly in sub-Saharan Africa.

The international institutions that are active in the area of population and family planning (and later reproductive health) have not been immune from the dominant population paradigms described earlier. Moreover, disagreements and rivalries arose as some agencies began favoring specific strategies. The most striking contrast has been between USAID, which funds the largest family planning program in the world, and UNFPA, the largest international organization specialized in the field of population. USAID privileged (and still does to a large extent) the offer of services and concentrated its efforts to make family planning programs and information,

education and communication programs (IEC) available, sometimes complemented by actions to change behavior. These services satisfy the latent demand for family planning, or at least favor its manifestation. On the other hand, the United Nations, through UNFPA, embraced a much broader approach to population questions, which are seen in the context of global development. UNFPA has thus argued for the inclusion of all sectors (education, gender, human rights, etc.) in the implementation of population and reproductive health policies. The adoption of the Cairo agenda in 1994 has further broadened the scope of the agency. However, in the early 2000s, the UNFPA has launched an initiative to "reposition" family planning within its reproductive health programs.

International institutions and agencies can evolve. This was the case with the World Bank and its programs. The first World Bank population loan, in the amount of USD2m, was granted to Jamaica in 1970 (to build its own capacity, the Bank started its population programs in small countries before moving to larger countries). Since then, the portfolio of loans, credits and grants prepared by the Bank in the area of health, nutrition, and population has grown, reaching a cumulative total of USD15.8bn in 1999 (1999 value), of which USD4.6bn were devoted specifically to population and reproductive health components (Global Health Council 2004; World Bank 2000b: 15). The Bank is currently the largest contributor to the sector for countries with medium or low incomes. The Bank also finances many projects dedicated to education, water, sanitation, urban planning, social protection (social funds), women's empowerment, etc., that all have direct and/or indirect effects on demographic variables (World Bank 2000b: 16).

The rapid expansion of the population portfolio of the World Bank was fostered under the leadership of Robert McNamara (1916–2009), its President from 1968 to 1981. His first speech as World Bank President at the 1968 Annual Meetings was devoted to rapid population growth and its negative impact on global economic development and people's welfare. The speech encountered strong resistance from the World Bank's own staff, which at the time was mostly composed of economists. Nonetheless, McNamara initiated the funding of family planning projects and the recruitment of population specialists. However, after the publication of the *1984 World Development Report* (WDR) devoted to population issues (World Bank 1984), the Bank did not push the population agenda as forcefully. Whilst still admitting that demographic growth is an important issue, the Bank did not spend much political capital to promote family planning programs. The effectiveness of the Bank's efforts in this area further declined with the wholesale acceptance of the Cairo reproductive rights agenda[6] (World Bank 1994b), the emergence of the HIV/AIDS crisis, the arrival of the George W. Bush Administration, and the appointment of social conservatives at key managerial positions within the Bank.[7]

[6] In addition, global health initiatives, health sector reforms, and new financial modalities from donors and lenders further threatened the reproductive health agenda; see Yazbeck (2004).

[7] Ironically, soon after the Cairo conference, the Bank changed the acronym PHN, which stands for population, health and nutrition, into HNP, thereby demoting population issues.

Among the professional associations that deal with demography and population-related issues, the International Union for the Scientific Study of Population (IUSSP) stands out as the leading international group of individuals interested in population studies. Originally founded in 1928, and reconstituted in 1947, the IUSSP is currently housed in Paris and has more than 2,000 members around the world. It carries out research on population themes and convenes major scientific conferences every 5 years. Its main goal is to foster relations between people engaged in the study of demography and stimulate interest in demographic matters among governments, national and international organizations, and scientific bodies (see www.iussp.org). The Population Association of America (PAA), the other main professional organization in the field (more than 3,000 members), was created in 1931. It is a "nonprofit, scientific, professional organization established to promote the improvement, advancement and progress of the human race through research of problems related to human population" (see www.popassoc.org). PAA members include demographers, sociologists, economists, public health professionals, and other individuals interested in research and education in the population field. PAA organizes annual conferences in the US and occasionally Canada. A number of regional population research organizations have also been created, often on the model of these two prominent professional associations.

Research organizations have also played a key role in the dissemination of research and ideas in the area of population, reproductive health and, more recently, HIV/AIDS. The Population Council is one such organization, founded in New York in 1952 by John D. Rockefeller III (1906–1978). It is an international, nonprofit, and non-governmental organization that carries out research on global population issues. The Council is a strong voice in the community of population and reproductive health scientists as well as program managers (see www.popcouncil.org).

Specialized scientific networks have also helped disseminate ideas and promote population paradigms. An example is the International Federation of Gynecology and Obstetrics (FIGO), the only worldwide organization that assembles obstetricians and gynecologists. FIGO's mission is to promote the well-being of women and to raise the standard of practice in obstetrics and gynecology. FIGO has grown from an organization representing the 42 national societies, which attended the founding meeting in Geneva in 1954, into a worldwide organization representing obstetricians and gynecologists in over 120 countries and/or territories. FIGO is a nonprofit organization funded through subscriptions received from more than 100 member societies, grants, and the proceeds of its triennial World Congress (see www.figo.org).

Finally, some institutions have directed their efforts toward population education. The Population Reference Bureau (PRB) provides researchers, journalists, policymakers, educators, and the general public with the resources necessary to make informed policy decisions on population issues. The PRB was founded in 1929 by Guy Irving Burch (1899–1951) as a private, scientific, and educational organization based in Washington, DC. The PRB gathers, interprets, and disseminates information on population trends and their consequences. It also publishes the

famous annual World Population Data Sheet, which offers updated demographic data for all countries around the world (see www.prb.org).

World Population Conferences

About a quarter-century after the creation of the United Nations in 1945, international conferences began to play an important role in the formulation of social and economic policies on a global scale. An international conference, devoted to environmental issues, was held in Stockholm in 1972. This successful meeting paved the way for subsequent international conferences that were meant to address a broad range of social problems (McIntosh and Finkle 2003: 168).

Between 1974 and 1994, the United Nations organized three world conferences devoted to demographic issues in Bucharest, Mexico, and Cairo (Singh 2009: 1; Chasteland 2002: 725–748; Chasteland 2006). These conferences contributed to the globalization of the population discourse, helped spread international population paradigms, disseminated knowledge among the general public, and fostered a process of collective learning. These events were widely covered by the national and international media and, as such, helped transform population and socioeconomic development issues into a global concern.

However, since they became genuine political gatherings, these events offered opportunities for occasionally acrimonious debates between "family planners", on the one hand, and promoters of socioeconomic development, on the other. During the conferences, and particularly in Cairo in 1994, the right and left wings clashed, and so did supporters of religious values opposed to advocates of individual rights and freedom. Agreements were eventually reached during the conferences, although sometimes at the expense of clarity. Moreover, most of the time, decisions were not followed up by concrete actions and substantial funding.

Several global population meetings were organized before the Bucharest, Mexico, and Cairo conferences. The very first international meeting on population issues was the World Population Conference, organized in Geneva in 1927 by Margaret Sanger (1879–1966). The famous birth-control advocate had been looking at ways to legitimize the subject of "overpopulation" in international circles. However, her activist stance was not endorsed by the eminent scientists she invited to the Geneva Conference. Eventually, she felt obliged to remove her name from the official documentation of the conference (McIntosh and Finkle 2003: 168). Although the World Population Conference was not sponsored by the League of Nations (the predecessor of the United Nations), it helped the League to play a more proactive role in population issues. Several United Nations specialized agencies were interested in these challenges, such as WHO and ILO. The 1927 Geneva Conference also decided to create the International Union for the Scientific Investigation of Population Problems (IUSIPP), a non-governmental organization mostly comprised of demographers and other scholars with an interest in population. The IUSIPP would later become the International Union for the Scientific Study of Population (IUSSP).

The United Nations Population Commission sponsored the first two modern scientific conferences devoted to population. They were organized in Rome and Belgrade, in August–September 1954 and September 1965, respectively. These meetings brought together experts, but did not involve governments. Consequently, they were technical rather than political gatherings. In Rome, 400 experts represented 74 countries; at that time, the United Nations had 60 member states. The experts debated the need to collect better data on population and establish demography as an autonomous discipline. On the whole, ideologies played a rather minimal role in the discussions (Notestein 1954: 247).

The Belgrade Conference was organized by the United Nations, the IUSSP, and the IPPF. In Belgrade, 1,400 experts from 88 countries studied the relationship between demographic variables and socioeconomic development and discussed the issue of family planning. Differences appeared in Belgrade along ideological and religious lines regarding the seriousness of demographic problems and the necessity to establish programs to reduce fertility. It was the first time a discussion on family planning was taking place within the United Nations, where the topic had always been sensitive (the need for action in the area of population would only be endorsed by the UN in 1967; see Symonds and Carder 1973: 175[8]). The design and implementation of population policies were deemed important by the participants, but were left to be decided by the respective sovereign governments. Additional technical conferences on population were organized periodically, for instance by American philanthropic foundations. The most notable example was the conference organized by the Population Council in Geneva in August 1965, just a few days before the Belgrade Conference.

Since the 1970s, population conferences were organized at ministerial level. This gave them more authority and visibility. By doing so, however, the conferences became much more political (Finkle and McIntosh 2002: 12–13). The first global inter-governmental conference on population was organized in Bucharest in August 1974. It convened representatives of 137 countries and was organized with another parallel conference of 1,400 experts and NGO delegates that gathered at the same time in the same city. The Bucharest Conference took place in the context of the Cold War and amidst concerns over rapid demographic growth in Asia. The background to the discussions was the Third World countries' claim for a New International Economic Order. This desire coalesced with diverse nationalistic and religious oppositions to family planning. The fierce debate opposed "family planners" and the proponents of development, convinced that socioeconomic development was the only remedy to mitigate rapid demographic growth in developing countries. This group was led by socialist and non-aligned developing countries. Among them, Algeria took the lead and was joined by Argentina and the Holy See. The family planners, on the contrary, believed that family planning programs could by themselves curb fertility levels, even in the absence of major progress in

[8]The same authors point to the lobbying exerted in the early 1950s by the Holy See, with the support of some countries (e.g., Belgium, Italy, and Lebanon), to ensure that family planning would not be included in the mandate of the World Health Organization (*Ibid.*: 58–66).

socioeconomic development. The family planners went as far as to stress that fertility declines were indeed a prerequisite to socioeconomic development. The family planners were essentially led by the US, Canada, and several European countries (e.g., the United Kingdom and Germany), but were also joined eventually by large developing countries, such as Mexico and Egypt (Finkle and Crane 1975: 108).

The main goal of the Bucharest Conference was to prepare a World Population Plan of Action or WPPA (United Nations 1975). This document, which was to be the first international declaration on population, was finally agreed upon despite the contradictory positions voiced at the Conference. The WPPA covered the inter-relations between population, development, and the international economy. It also stated couples' right to choose the size of their family, and governments' responsibility to provide couples with the actual means to exercise this right. Finally, the document insisted on the need to accelerate economic and social development and to usher in a new international economic order.

The Bucharest Conference was followed by the Mexico International Population Conference, held in August 1984. The Mexico Conference, where 147 countries were represented, was convened to assess progress on the WPPA and formulate recommendations for its continued execution. The Conference was prepared during four meetings of experts and five regional (continental) conferences. In addition, NGOs were invited to a preparatory meeting in 1983 and to the main Conference. Two documents were drafted, namely the Mexico Declaration on Population and Development (including 88 recommendations) and the Mexico Recommendations.

In Mexico, delegates reached an agreement on the need to reduce fertility and design population policies. Southern countries abandoned their "all development" line. However, the discussions were clouded by the reversal of the American traditional position on population. The newly elected Republican Administration[9] implicitly denied that there was a "global population crisis that require[d] drastic forms of intervention by governments" (Finkle and Crane 1985: 11). This also led the US Delegation to question the effectiveness of family planning programs and to promote the role of the private sector to foster economic growth (United States 1984). It was the beginning of the wave of economic liberalism. Market rules and private initiatives were supposed to solve social problems (to some extent, these ideas have come back with the concept of globalization).

The US also voiced their opposition to abortion. As a matter of fact, the US threatened to withdraw federal support to US-funded groups that would perform, advocate, or even refer to abortion services in their programs, even if these programs were to be funded by other sources. This became to be known as the Mexico City Policy and, with respect to the restrictions on induced abortion, as the Global Gag Rule (a pejorative expression coined by the opponents of the policy). The US later withdrew its support to UNFPA, accused of having turned a blind eye on the issue of abortion in the Chinese population program (even though UNFPA had not financed abortion there or elsewhere).

[9] Ronald Reagan (1911–2004) was the US 40th President (1981–1989).

In September 1994 the ICPD, also known as the Cairo Conference, brought together 180 countries (at that time, the United Nations had 189 member states; see United Nations 1995b). Prior to the ICPD, the United Nations organized six expert meetings, eight round tables on technical subjects, and three preparatory meetings that were all open to all countries. In Cairo, 1,200 NGOs were accredited and played an important role in the discussions. The Cairo Conference carried on the discourse surrounding the WPPA. The Conference produced the Programme of Action of the ICPD, covering 20 years, which stressed both the ongoing nature of any effort to address population issues and the need for concrete actions.

The ICPD was innovative in that for the first time it proposed quantitative goals for access to family planning services: reduction of maternal and infant and child mortality levels, and primary education (priority being given to female education).[10] Several issues bitterly divided the participants, namely free access to abortion (opposed by several delegations from Islamic countries, the Holy See, and some feminist groups), adolescents' access to contraception, and the mobilization of resources for the overall ICPD program. For the first time ever in a major population conference, the severe consequences for mothers' health of abortions performed in poor conditions (such as death, morbidity, and sterility) were acknowledged to be a serious public health problem. An almost global consensus emerged in Cairo, despite the opposition that was voiced by some Islamic countries and the Holy See to induced abortion and further empowerment of women (Chasteland 2002; DeJong 2000; McIntosh and Finkle 1995).

The 1994 ICPD was the last world population conference. Its recommendations were re-examined by the United Nations General Assembly in 1999 (ICPD+5), 2004 (ICPD at 10), and 2009 (ICPD at 15). Since 1994, no major population conference has been organized to mark the decade that had passed since the Cairo Conference. Moreover, no population conference is currently scheduled (May 2005: 842), although a new population conference could possibly take place in 2014. To some extent, the MDGs, with their target year of 2015 address many of the development issues analyzed the ICPD Programme of Action. However, it can also be argued that the MDGs did not cover reproductive health and family planning issues as extensively as they should have (this issue will be addressed later in this chapter).

The United Nations has organized numerous other conferences on subjects related to those discussed at the conferences of Bucharest, Mexico, and Cairo. Among the most important are, chronologically: the 1968 International Conference on Human Rights in Tehran, the 1989 Amsterdam International Forum on Population in the Twenty-First Century, the 1992 Conference on Environment and Development in Rio de Janeiro, the 1995 Conference on Women and Development in Beijing, and the 1995 World Summit for Social Development in Copenhagen.

[10] In its 16 chapters, the extensive ICPD Report covered a wide range of topics, *inter alia* population growth and structure, mortality, fertility, population distribution, international migration, education, technology, research, and international cooperation. Unfortunately, public and media attention focused almost exclusively on Chapter VII, which dealt with reproductive rights and reproductive health, and Chapter VIII, which covered abortion (paragraph 8.25). As a result, the world lost sight from the global perspective offered by this comprehensive document.

The 1968 Tehran Conference was particularly important. It concerned human rights, a guiding theme for many development agencies, and a theme that was discussed in many population conferences later. For the first time, it was made clear that individuals and couples have the right to freely and responsibly decide the number and spacing of their children (and must be provided the means to exercise that choice). The 1989 Amsterdam Forum promulgated a Declaration for a better life for future generations, with an emphasis on international cooperation. The 1992 Rio de Janeiro Conference defined renewable development,[11] a major topic of all subsequent conferences on long-term development. Last but not least, the Beijing Conference and the Copenhagen Summit, both held in 1995, reinstated women's central role in development.

Since the relationships between population and socioeconomic development are complex and demographic dynamics impact multiple sectors, the population conferences dealt with most areas of development including, but not limited to: health, nutrition, education, labor force, status of women, gender issues, urbanization, environment, and legal reform. The recommendations made to the governments, as well as the international and regional organizations, outline the actions deemed necessary to achieve a balance between population growth and available resources. The Mexico Conference asserted that "the essential goal of social, economic, and human development, of which demographic policies and objectives are an integral part, is to improve the living standards of populations" (United Nations 1984: paragraph 5).

The major population conferences also stressed the prominent role of the state, expected to intervene in all sectors of activity referred to in the conferences' recommendations. It was also suggested that the technical expertise in the area of population be supplied through multilateral assistance, bilateral contributions, and South-South cooperation. As mentioned, the conferences were well covered by the international and national media, popularizing population concerns among a very wide public audience. On July 11, 1987, the world observed the Day of the Five Billion (the day the population of the world reached the 5bn mark). As this celebration generated some interest, it evolved into the World Population Day, commemorated every year since 1989 with a different theme.

Issues that were debated at the population conferences were further spread by the emergence of many NGOs active in the area of population and family planning. Overall, the conferences proved to be an important vehicle to disseminate new ideas and approaches. At the same time, the conferences enhanced the convergence of opinions, which was to a large extent achieved in Cairo, despite some tough discussions. Therefore, the conferences contributed to the globalization of the population discourse, helped spread international population paradigms, and facilitated a collective learning process. As a consequence, the perception of population problems was no longer national but became gradually transnational. The transmission of experience in the area of population programs also became transnational (United Nations 1990a).

[11] A similar conference is planned for 2012.

Another phenomenon that appeared over the successive conferences was the diminishing role of the US. The US was at the origin of the *Population Movement*, but saw its leadership on population and development issues slowly taken over by the United Nations, and later by European countries and Japan.[12] The reversal of the US political position at the Mexico Conference dealt another blow to the US supremacy in this area (Chasteland 2002: 734–735). Moreover, the US' position in the international debate on population issues has also been considerably weakened by the domestic abortion politics. This led to periodic de-funding of agencies such as UNFPA and IPPF. Nowadays, however, the US is coming back to the issues of reproductive health and family planning under the new Global Health Initiative of the Obama Administration.

Finally, it should be noted that consensus-building through international conferences and their preparatory meetings is often inefficient as a process, whereas such events could be used to promote learning among policymakers and experts. The goal should be to support more flexible, knowledge-based government policies instead of general approaches articulated by the transnational policy coalitions. In addition, the gap between the conferences' resolutions and the actual policies implemented at country level is important to remember. The conferences' recommendations were adopted in a specific, often euphoric context, more like declarations of principle than concrete engagements. They were far from involving all continents and countries in the same way.[13] Furthermore, assurances for funding made in Cairo were far from being backed by concrete actions.

New Developments and Old Controversies

Ideological clashes and political controversies marked the years following the 1994 ICPD, although it could be argued that they started one decade earlier at the Mexico Conference (Eager 2004: 60–98). After Cairo, it is fair to say that the last period identified by Finkle and Crane, namely the competitive pluralism in population policy approaches, was replaced by a time of doubt and uncertainty vis-à-vis population and reproductive health issues. However, recently there have been some signals of the return of the population, and particularly the macro-demographic issues, into the general development discourse in particular with respect to global challenges such as climate change (Jiang and Hardee 2010; O'Neill et al. 2010).

[12] European countries, which wanted to fund reproductive health, became major donors of UNFPA, which explains in part why this agency somewhat lost sight of family planning goals.

[13] Sometimes, declarations endorsed internationally by governments are adopted with considerable delays by their national parliaments. For example, the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, which was adopted in July 2003 by the African Union in the form of a protocol to the African Charter on Human and Peoples' Rights, was signed by 46 countries but was ratified by only 28 countries as of July 2010. The "Maputo Protocol" guarantees comprehensive rights to women including the right to take part in the political process, to achieve social and political equality with men, to control their reproductive health, and to end female genital mutilation.

Today, population and reproductive health issues oppose two major camps. On the one hand, international public health circles, international family planning networks (including NGOs, which have become stronger and financially more autonomous), and environmentalists wish to reduce population growth. On the other, social and religious conservatives as well as right-to-life activists, who are hostile to abortion and family planning methods, have maintained their positions and resisted change. They have been either empowered or shunned by the vagaries of US politics.

Before and after the Cairo Conference, doubts were voiced, mostly by economists, with respect to the importance of demographic variables in socioeconomic development. Around that time, the controversy around abortion also started to take preeminence, particularly in US politics, and has ever since poisoned the debate on population and reproductive health issues. Concomitantly, a strong social conservative movement took off as well, reinforced by Republican Administrations in the US. The advances of the feminist movement also influenced the debate on population, and helped shape the concept of reproductive rights adopted in Cairo (Dixon-Mueller 1993; Hodgson and Watkins 1997). Finally, the period was marred by the emergence of the HIV/AIDS epidemic, which contributed to divert funds from family planning programs.

Turning to the relationship between population and development, the economists have consistently challenged the importance of the population variables in socioeconomic development (for a presentation of this debate, see Chap. 3, section "Population and Socioeconomic Development"). Today economists agree that improving economic conditions for individuals generally leads to lower birth rates. However, despite the mounting evidence, they have not yet agreed that lower birth rates would contribute to economic development and help individuals and households escape poverty.

The debate has had an impact on international assistance programs. At the time of the Mexico Conference in 1984, the World Bank issued a World Development Report (WDR) addressing population change and development (World Bank 1984). The report took the view that rapid population growth was indeed a problem for economic development. According to a review of the World Bank WDRs written by Angus Deaton, "the most important intellectual legacy of (the) report was (perhaps) the establishment of a National Academy of Sciences (NAS) panel under the chairmanship of Sam Preston, which produced an authoritative modern account of the issue and which takes a very different view from the WDR", namely that demographic variables are neutral with respect to economic growth. Deaton, an economist himself, concludes his analysis by stating that "the (World Bank) population report was clearly an example not of Bank intellectual leadership, but of the Bank being well behind then-current best thinking", allegedly because the population control agenda had already lost its momentum and credentials in the early 1980s (Deaton 2009: 108).

This analysis appears to be superficial. First, an earlier report from the same US National Academy of Sciences (NAS) concluded that rapidly growing population was actually an impediment to economic development (National Academy of Sciences 1971). Second, population policies and family planning programs aimed at reducing high fertility levels were still implemented around the world in the late

1980s and in the 1990s. For instance, the Islamic Republic of Iran, which experienced "the largest and fastest fall in fertility ever recorded", achieved most of this success in the 1990s (Abbasi-Shavazi et al. 2009: v; see also Chap. 6, section "Family Planning Spreads Around the World"). Third, the Asian miracle (the extraordinary economic boom) is largely attributed to major demographic and educational changes that these population policies triggered and made possible. Another seminal study by Birdsall and colleagues (she was the author of the 1984 WDR) demonstrated the impact of changes in the age structures and dependency ratios on socioeconomic development in Asian countries (Birdsall et al. 2001). Fourth, the current discourse on population and development has taken a completely new turn and stresses the importance of the fertility decline and changes in the age structure to facilitate human capital investments, particularly in education and health. The linkages between high fertility and poverty are also receiving renewed attention, especially with respect to the lower wealth quintiles of the population. In addition, both the health and the environmental rationale for fertility reduction still remain entirely valid. In the view of this author, it is actually the demographic and economic situation of sub–Saharan Africa and the delayed fertility decline in most parts of the continent that will vindicate the view that population matters for socioeconomic development (Ndulu et al. 2007: 33–34). This will eventually force economists to reassess their traditional assumptions.

Next, the controversy about induced abortion, particularly in the US, is another issue that polarized policy actors. As such, it played an important role in shaping international population policies, since the US remained over the years a major donor of family planning programs, despite the relative erosion of the dominant position of the country in the area of population and reproductive health.

The controversy pertaining to induced abortion in the US was not settled with *Roe v. Wade*, the January 22, 1973 landmark decision of the Supreme Court, which ruled that states' restrictions on abortion were not constitutional. *Roe* v. *Wade* was in fact a judicial decision, not a law passed by Congress. Therefore, it did not bind the public in the same way legislative assemblies did, for instance in Europe, when passing abortion laws with a majority of parliamentary votes (see Garrow 1994 for an extensive history of the legal aspects of the abortion debate in the US). As a result, the abortion debate in the US remained acrimonious. Those opposed to abortion, the pro-life camp, feel that they have every right to challenge a judicial decision. Those in favor of women's right to choose, the pro-choice camp, have put all their efforts in maintaining the Supreme Court's decision that, in their opinion, vindicated their position. Subsequently, attempts to uphold or overturn *Roe* v. *Wade* by appointing liberal or conservative Supreme Court judges is a regular element of US politics. Various constituencies (e.g., the Christian Coalition) and the Republican administrations played abortion politics shamelessly to appeal to their conservative constituencies for electoral gains. The words pro-life and pro-choice became political litmus tests for the Right and the Left, respectively.

The so-called "Global Gag Rule" was instituted at the 1984 Mexico Conference by a Republican Administration. As mentioned, it forbade American organizations receiving federal funds to make any mention of, or referral to, induced abortion,

even if using their own resources to do so. By tying the US funding of international agencies to the abortion issue (the US contribution to UNFPA was suspended on several occasions), these political forces inevitably brought the US domestic abortion debate into the international arena.

Abortion became a topic, and a word, to be avoided at all costs, as well documented by Dennis Hodgson (2009). Policymakers in international conferences have muted their voices when the topic of abortion was raised. Family planning was defined in ways that explicitly excluded abortion and the "contraception-only" definition of family planning became *de rigueur*. Those who are opposed to abortion affirm the moral imperative to protect the life of the unborn and equate induced abortion with murder. They invoke their moral position, namely that abortion is always evil. They argue that abortion should be banned in all circumstances and that those who perform the procedure should be prosecuted, leading to the criminalization of abortion. Those in favor of women's right to choose claim that it is a public health measure that can save lives of women, particularly those who are at an economic disadvantage. For them, all necessary measures should be taken to make abortion available, including broader access to modern contraception and better social programs to minimize the need to resort to abortion. Under this pragmatic approach, groups at risk, even adolescents, should be provided with adequate reproductive health services. In short, induced abortion should be "safe, legal and rare" (although some feminist activists would insist that the adjective "rare" be dropped).

Today, it seems that the pragmatists have the upper hand, at least to some extent. The number of abortions appears to be lower in countries that have both legalized the procedure and provided effective access to modern contraceptive methods (Francome and Vekemans 2007: 145–156). In particular, women are at risk to undergo an unsafe abortion when abortion laws are restrictive (Singh et al. 2009a: 25–29). Differences between countries are illustrated by a stunning comparison of the situation in Denmark and the US. The former country, with quite liberal policies, has far fewer induced abortions and better reproductive health outcomes that the latter, where more restrictive policies are in place (David et al. 1990). In some countries, such as Brazil, induced abortion appears to be less a moral dilemma than a public health issue, the point being to avoid unnecessary maternal deaths that are often caused by the criminalization of the procedure leading to unsafe abortions. However, one should not discount the issue of moral hazard: if abortion is made readily available, women might be less careful in using contraceptives, since they know that they could eventually have access to induced abortion services. Anecdotal evidence indicates that some women from urban areas in Madagascar may initiate their own induced abortion because they know that they will be granted access to a post-abortion care (PAC) clinic.

At around the same time, a strong social conservative movement took off. It fed off the renewal of the traditional strains of Christian and Muslim faiths, but was also fueled by the US abortion politics. This social and religious conservatism opposed family planning, reproductive rights, women's empowerment, and Western liberal values more generally.

A good example of this conservative revival is the position of the Catholic Church vis-à-vis the use of modern contraception (see Chap. 7, *Focus: Roman Catholic Views on Modern Contraception*). Since the beginning of large scale family planning programs, discordant and sometimes strident views have been voiced as to the alleged dangers of such far-reaching endeavors. The *Bitter Pills* essays by Donald Warwick (1982) and the more controversial *Reproductive Rights and Wrongs* by Betsy Hartmann first issued in 1987 (Hartmann 1995) both illustrate the darker side of family planning programs and their link to overall goals of population control. Often, these programs were equated with top-down approaches, coercion, and disregard of the rights of women. However, more recent historians of family planning programs have over-demonized the *Population Movement* (Connelly 2008). They have insinuated, but not proved, that it was a global conspiracy, linked to somber motives of eugenics (Basu 2009: 189–191). In their view, the malevolence of family planning programs ought to be vigorously denounced[14] (for a good summary of the pro-family planning arguments, see Bongaarts and Sinding 2009).

The controversies and ideological clashes that surfaced at the major population conferences have continued unabated since the 1994 Cairo Conference. They translated into a severe de-funding of international population programs. Republican politicians also reinforced what has been called the "conservative revolution". The US position at the Mexico Conference was the most visible signal of this sea change. During the Bush Administration, conservatives even opposed the use of the term "reproductive health services". However here lies a major paradox, namely that the de-funding of family planning programs eventually hampered efforts to promote socioeconomic development. As the well-known economist Jeffrey Sachs put it, the Bush Administration's position on family planning was probably its single most misguided policy because "it runs directly against American interests in the reduction of conflict and terror, as well as against the support of economic development and environmental sustainability more generally" (Sachs 2008: 183). Today, a new population paradigm could emerge, one that would hopefully be less ideological, more pragmatic, and more centered on the needs of women.

Feminist perspectives also played a significant role in shaping the new discourse on population and, particularly, reproductive rights. The international feminist movement was traditionally split between gender scholars and activists, as well as Northern and Southern feminists. Historically, feminists have been divided on the importance of family planning to women's empowerment. Feminist activists in the South are not convinced that rapid population growth is a problem that warrants specific public policies. Notwithstanding their divisions, "most feminist activists share a commitment to equal rights and resources for women and men" (England 2003: 399). Most feminists also want reproductive freedom and reproductive health services as a basic human right of women, even though this could be resisted by men and/or by political or religious leaders (England 2003: 400).

[14] With the benefit of hindsight, one may regret that population and family planning professionals at the time did not denounce sufficiently the abuses of the programs in India and China.

In Cairo, feminists from the North and the South united forces and influenced international population policy. Most governments, international agencies, and influential NGOs accepted the importance of women's empowerment (i.e., female education and greater economic, social, and legal autonomy) in decreasing fertility levels. However, this goal was seen as important in its own right and not as a mean of reaching macro-demographic objectives (e.g., to stabilize world population). Coercion and numerical targets for policy efforts were also denounced forcefully. Southern feminists have a broad view of reproductive health that includes maternal and child health programs, family planning services, sex education, the fight against female genital mutilation, and the treatment of sexually transmitted infections, HIV/AIDS, and breast cancer (England 2003: 400).

In the case of low fertility, feminists argue that gender inequalities have the opposite effect than in the South, namely that they contribute to continuing fertility decline (England 2003: 401). They invoke the opportunity cost of having children that is born essentially by women, as well as the difficulty of enticing men to perform duties and chores that are traditionally assigned to women.

Finally, the beginning of the HIV/AIDS epidemic in the early 1980s has further shaken the accepted paradigms. The epidemic was perceived as a major public health threat and, to a large extent, was deemed by policymakers and leaders to be an issue of survival, in particular in sub-Saharan Africa. Later the HIV/AIDS epidemic gained momentum, turned into a pandemic, and spread to most parts of the world (see Chap. 2, *Focus: The HIV/AIDS Epidemic*). The HIV/AIDS threat triggered an unprecedented response, with the commitment of high levels of national and international leadership, the support of many organizations, and the mobilization of important financial means (Whiteside 2008: 109–113). The response to HIV/AIDS took place at the expense of ongoing efforts in family planning and reproductive health. In a matter of a few years, the HIV/AIDS crisis overshadowed decades of endeavors in family planning. In sub-Saharan Africa particularly, the HIV/AIDS crisis diverted the public attention from the issue of rapid population growth.

In the first steps of this unprecedented response, the HIV/AIDS programs were most often "vertical" with a strong emphasis on medical interventions. They were not integrated with the delivery of family planning services. At the time, it was deemed irresponsible to blend HIV/AIDS, allegedly a "bad thing", with the provision of contraceptives, allegedly a "good thing". This was deemed even more difficult as contraception was no longer perceived as an urgent priority given the high toll of the HIV/AIDS epidemic. May et al. (1991) argued early on that the international community should harness the synergies between family planning and HIV/AIDS prevention programs. It was only a decade later that efforts were carried out to identify across these two different programs the bridges that had become more necessary in times of budget constraints.

This shortsighted approach proved to be a major mistake, as it contributed to the de-funding of family planning programs around the world. Later, family planning programs were subsumed in broader reproductive health efforts and suffered an additional blow as financial resources were geared at strengthening health sector systems to the detriment of the specific delivery of family planning services.

Today, however, population advocates and donors, including USAID and UNFPA are working to reposition family planning within the wide spectrum of other health interventions, i.e., reproductive health, HIV/AIDS, health sector systems strengthening, and the fight against major diseases such as tuberculosis and malaria.

The Millennium Development Goals

During the 1990s, a new international concern emerged, namely the widening gap between rich and poor countries. Consequently, world leaders and the international development community became determined to promote human development. Several international conferences helped to forge a wide consensus to achieve global goals in this area. In September 2000, the United Nations Millennium Summit, which was attended by 189 heads of state and governments, approved a set of eight development goals that were called the Millennium Development Goals (MDGs) (UNDP 2003; see also www.undp.org/mdg). These goals encompass a broad range of development endeavors, and their specific aims are listed below. The MDGs were agreed upon by the member states of the United Nations and the international development institutions, and are to be attained by 2015.

The eight Millennium Development Goals, including their 19 targets (but not their 60 indicators for monitoring progress), are as follows:

Goal 1: Eradicate extreme poverty and hunger

Target 1a: Reduce by half the proportion of people living on less than a dollar a day

Target 1b: Achieve full and productive employment and decent work for all, including women and young people

Target 1c: Reduce by half the proportion of people who suffer from hunger

Goal 2: Achieve universal primary education

Target 2a: Ensure that all boys and girls complete a full course of primary schooling

Goal 3: Promote gender equality and empower women

Target 3a: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015

Goal 4: Reduce child mortality

Target 4a: Reduce by two thirds the mortality rate among children under five

Goal 5: Improve maternal health

Target 5a: Reduce by three quarters the maternal mortality ratio

Target 5b: Achieve, by 2015, universal access to reproductive health

Goal 6: Combat HIV/AIDS, malaria and other diseases

Target 6a: Halt and begin to reverse the spread of HIV/AIDS

Target 6b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it

Target 6c: Halt and begin to reverse the incidence of malaria and other major diseases

Goal 7: Ensure environmental sustainability

Target 7a: Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources

Target 7b: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss

Target 7c: Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation

Target 7d: Achieve significant improvement in lives of at least 100m slum dwellers, by 2020

Goal 8: Develop a global partnership for development

Target 8a: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system

Target 8b: Address the special needs of the least developed countries

Target 8c: Address the special needs of landlocked developing countries and Small Island Developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the 20-s special session of the General Assembly)

Target 8d: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

Although the MDGs helped reframe the international development agenda, they neglected reproductive rights issues (Crossette 2005). The "exclusion of the reproductive health goal from the MDGs was a matter of political expediency … Opponents of the goal had characterized it as promoting abortion and undermining family values by calling for sex education for adolescents" (Campbell White et al. 2006: 5). The MDGs as a whole were threatened by this fierce opposition on one target. Therefore, the only way to reach a consensus and adopt the MDGs was to eliminate the reproductive health goal. Still, the full achievement of MDG 5, which has been dubbed the "mother of all MDGs", is paramount to reaching several other MDGs. This glaring gap was finally addressed with the addition in 2005 of indicators specifically related to reproductive health, in particular the contraceptive prevalence rate and level of unmet need for family planning (United Nations 2007a: Annex II; see also www.undp.org/mdg).

The paradox is that while the MDGs do not mention demographic variables specifically, the achievement of seven out of eight goals will depend on future demographic outcomes (Haslegrave and Bernstein 2005). The first MDG, namely to eradicate poverty, can only be achieved with smaller family sizes. Poor households, with the largest number of children, have the greatest difficulties to secure access to education, health, and food. They also have less access to monetary employment. The second MDG, to achieve primary education, cannot be reached in 2015 with school-age populations that are doubling every 20 years or so, as they are in many

sub-Saharan countries. Gender equality (MDG 3) is crucial in countries where "reproductive rights" remain nominal and are not a daily reality. MDGs 4 and 5, on child mortality and maternal survival, will have a direct impact on demographic outcomes. They cannot be reached when half of the pregnancies are at risk because they are too early, too late, too many, and too close. MDG 6 can only be implemented with adequate health facilities and personnel, which again are difficult to muster when population is increasing rapidly. Finally, MDG 7 on the sustainable environment also implies a reduction of the rate of population growth, as this is a crucial step to reduce the demographic pressure on ecosystems.

It could be argued that MDG 8, namely to develop a global partnership for development, would be particularly important to coordinate efforts in the areas of population and reproductive health. At international level, such coordination is spearheaded in principle by the United Nations, although one could argue that it could be more effective. At national level, coordination has taken place in some countries. In Bangladesh, for instance, a Population and Health Consortium was established in 1987 as a semi-formal grouping of the World Bank, its co-financing partners, and several UN agencies. The Consortium helped bring some harmonization among donors and more importantly between the government and the donors' community (World Bank 1991: 46–47).

Improvements in Population Monitoring

The internationalization of population issues and international population conferences have also brought about major improvements in the collection of demographic data as well as the monitoring of population trends, governments' views, and policies, both at national and international levels.

In particular, the United Nations and its specialized agencies and, to some extent, the US Bureau of the Census, have spearheaded efforts to collect and analyze data on population trends at country level. This was achieved by supporting the countries, technically and financially, to organize their population censuses and surveys, strengthen their vital registration systems, and analyze the data collected. These efforts, which mobilized considerable public resources, have boosted the knowledge about population trends, particularly in the developing countries.

Focus: The International Drive to Collect Demographic Data

> The best way to know a population is through the organization of regular censuses and surveys, the continuous registration of vital events (vital statistics), and the establishment of other systems of demographic data collection, e.g., population registers. Most industrialized countries organize population censuses on a regular basis and have good vital registration data as well. In addition to these two main sources of data, statistically advanced countries have established population registers that provide a wealth of demographic information.

The major challenge remains to collect reliable demographic data in developing countries. Over the last decades, significant efforts have been deployed to help governments collect data through the organization of censuses and particularly surveys and, to a lesser extent, the strengthening of vital registration systems. Nonetheless, the international funding for data collection operations, in particular of population censuses, has considerably decreased after the 1994 ICPD, as donors no longer placed data collection as their top priority. At the time, the emphasis was put on reproductive rights instead; later funding earmarked to population and reproductive health programs dwindled because of the HIV/AIDS crisis.

Population censuses (often coupled with housing censuses) are major and expensive operations that require considerable logistical preparation in order to implement a chain of complex activities. These include updating census maps, drafting questionnaires (to be filled out by respondents themselves or to be administered by enumerators and supervisors), computerized processing of data, analysis of results, preparation of population projections, and, last but not least, use of results for advocacy and population policy formulation.

Censuses are defined by four criteria: individual, universal, simultaneous, and periodic. They usually collect information on households as well. Enumeration can be conducted *de jure* (all legal residents are enumerated) or *de facto* (enumeration of all persons physically present in the country at the census' reference time). Questionnaires routinely include age, sex, place of birth, place of current and previous residence, level of education, employment status, and housing characteristics. In developing countries, additional questions are often included on mortality and fertility (and sometimes on migration). Data collected through these "indirect questions" permit indirect estimations of mortality and fertility levels. This is done through techniques specifically designed for defective data, thanks to theoretical contributions of William Brass (1921–1999). Ethnic and religious information may also be asked in censuses, as long as the privacy of respondents is protected.

Some countries have a long history of census taking. For example, the US has conducted decennial censuses since 1790. The most recent US census was carried out in 2010, but the classic format has been changed with only 10 standardized questions instead of the usual 50 or more. In addition to these 10 questions, an American Community Survey (ACS) conducted randomly throughout the country is meant to complement census data. The 2010 US Census was also the most expensive ever, a whopping USD14bn. In contrast to early censuses in the US, decennial census taking started in the nineteenth century in some developing countries, for example in India in the 1870s (Caldwell 2003a: 217) and in Egypt in 1897 (Robinson and El-Zanaty 2007: 15). However, it is only after World War II that most developing countries organized regular population censuses. At that time, the United Nations coordinated large-scale rounds of population and housing censuses, usually at the beginning of new decades, in order to help governments undertake these major data collection operations. Such efforts were often supported by technical assistance and funding from the US Bureau of the Census and USAID.

Unfortunately, even a good census cannot provide all the information that is required for policy design and development planning. In developing countries, census data must be complemented with information collected through demographic surveys. The World Fertility Survey (WFS) was carried out between 1972 and 1984 and was considered the most expensive survey ever conducted. It was also the first attempt to apply a standard questionnaire on human fertility to a series of countries, industrialized as well as developing. Over a span of 12 years, 41 national surveys were carried out in developing countries and an additional 20 others in developed countries (Cleland and Verma 1989: 756). The rationale for these surveys became evident since they showed a clear need to curb rapid population growth in the developing world. A great feat of the WFS was to bring back the scientific integrity of the survey methodology in the field of demography. This has benefited rounds of surveys that were conducted later, such as the Contraceptive Prevalence Surveys (CPS) from 1977 to 1985, the World Health Surveys (WHS), and more recently the Demographic and Health Surveys (DHS).

The Demographic and Health Survey (DHS) program, launched in 1984, has been implemented in more than 60 developing countries throughout the world and has assembled an internationally standardized and comparable body of demographic and health statistics data (Ayad and Barrère 1991). These "nationally-representative household surveys … provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition" (see www.measuredhs.com) and are generally conducted at 4- to 6-year intervals. The core questionnaire covers fertility and preferences surrounding fertility, family planning (knowledge, past and current use, method mix, and means of supply), pre-natal care, assistance during labor, vaccination, excision, prevalence and treatment of diarrhea, breastfeeding and complementary feeding, knowledge of and attitudes toward sexually transmitted diseases, especially HIV/AIDS, and infant and child mortality. With such specific questions on immunization, nutrition, and HIV/AIDS (including tests of respondents' HIV status in more recent DHS+ surveys), these surveys add a medical dimension to the usual interests of demographers. New sets of questions have recently been designed, with gender modules as well as questions on malaria and gender-based violence.

The third main source of demographic information is the registration of vital events. In fact, vital statistics are a by-product of the system that records births, marriages, divorces, and deaths for administrative and legal purposes. These systems were first introduced in Western Europe back in the fifteenth and sixteenth centuries. In industrialized countries, the vital registration system functions rather well. In developing countries, however, vital statistics are often of poor quality and the coverage of events is incomplete, especially with respect to mortality. Efforts to improve vital statistics in developing countries are costly and generally not funded by external donors to the same extent as censuses and surveys. However, simple methods such as providing birth and death forms directly at hospitals and health centers have helped improve coverage (this has been piloted in Namibia).

Population registers are yet another form of collecting demographic data that have been established in Western and Northern Europe, as well as East Asia. They are systems of continuous observation of demographic and social information on every registered resident in a given country or territory (Tabutin 2006: 499–501). Although collected data primarily serves an administrative function, population registers also provide statistics on births, deaths, and internal and international migration movements. In principle, records are added with entries from abroad (immigration) and deleted with departures (emigration). However, criteria determining residency and whether or not a record is added or deleted vary between countries. Differences can also exist within countries between different population categories, particularly between local residents and foreign populations. Therefore, comparisons between and within countries may prove difficult.

Other data collection systems have been designed, such as ongoing demographic surveillance systems or population laboratories. These were sometimes tied to specific projects (e.g., program and control areas), such as the family planning experiment initiated in the Matlab sub-district of Bangladesh in 1977. Alternatives have been proposed to traditional censuses. These include the micro-census or "light census" accompanied by an extensive survey (using sampling techniques), and the French attempt at a "rolling census", where a different segment of the population is enumerated on a rotating basis (Tabutin 2006: 505).

It is often assumed that the desire to know the population is the first step toward addressing population issues. Indeed, the collection of reliable demographic data remains of paramount importance in designing effective population policies. In this respect, it is worth remembering the words of the late Dr. J.W. Lee (1945–2006), WHO Director-General, who said in 2004: "to make people count, we first need to be able to count people".

Before the Bucharest Conference in 1974, major international efforts to gather and monitor population data were also carried out. Governments around the world were invited by the United Nations to report about their population dynamics and policies as early as 1963 (questionnaires were regularly sent to each of the

United Nations member states and non-member states). With respect to population policies, the information requested covers two main areas. First, the questions address the governments' views on population size and growth, population age structure and spatial distribution, and the demographic components of fertility, mortality and migration which affect them. For each of these variables, governments must indicate whether the level or trend is viewed as a significant policy issue and whether the prevailing level or rate of change is seen as too high, too low, or satisfactory in relation to other social and economic conditions. Second, governments must spell out their policies regarding each demographic variable. They must also indicate whether their policy is to increase, lower, or maintain the current level of the specific variable and, finally, whether the government has actively intervened to influence the variable and, if so, by what means.

These population policy inquiries (i.e., the series of *United Nations Inquiry among Governments on Population and Development*) were initiated in 1963 as mentioned, and conducted every 5 years. As of 2011, the UN had conducted ten such enquiries. The results, which are complemented by additional information, are published in the biennial UN reports *World Population Policies* (United Nations 2010c). The results show, on a country-by-country basis, the evolution of governments' views and policies with respect to population size and growth, population age structure, fertility and family planning, health and mortality, spatial distribution and international migration within the context of demographic, social and economic change. The main added value of these questionnaires is to gather data on the governments' views on demographic trends, which sometimes are more important than the trends themselves when it comes to the formulation of population policies. Unfortunately, the inquiries do not ask countries to provide the date of their national population policies or revisions thereof. Along the same line, surveys have also been conducted in industrialized countries on attitudes of the general public vis-à-vis population issues.

Finally, it should be mentioned that since the September 11, 2001 attacks on the US, better data have been collected on international monetary transfers. This has had the indirect result of throwing new light on the remittances of international migrants.

The Availability of Population Projections

The advent of widespread population projections and the fact that they could be produced easily with computer software also helped foster the awareness of, and discussions on, population issues. Nonetheless, there appears to be a disconnect between the large amount of analytical work in demography, on the one hand, and the scant attention that is usually paid to the assumptions underlying population projections, on the other. Moreover, only a few demographers actually prepare projections and the assumptions they use are seldom discussed openly (Lutz 2011: 4).

The first techniques to prepare population projections were rather simple, such as the mere application of a given rate of demographic growth to the initial population

(the ratio method). Eventually, this method was refined by using varying rates of growth over time or by applying differential rates of growth to subsets of the population (e.g., males or females, urban or rural populations, etc.). The methodology of population projections improved at the end of the nineteenth century, in particular with the contributions of the British economist Edwin Cannan (1861–1935), published in 1895. The cohort–component population projections technique that he proposed was further refined in the 1930s by the American demographer Pascal K. Whelpton (1893–1964) (O'Neill and Lutz 2003: 808). Later, more sophisticated projections techniques also became available, such as probabilistic population projection models.

The method of the cohort-component projections, still widely used today, proved to be the most robust and the simplest to compute. The cohort-component method involves calculations done by cohorts, which are groups of people born during the same year or during a number of years (usually 5 years). The computations rely on the specific information available by cohorts and pertaining to the various demographic components of population growth (i.e., mortality, fertility, and migration). The calculations are most often done for 5-year age groups and for leaps of five calendar years. Populations are usually projected for a given period of time, most often 30 or 50 years, which is called the projection span.

In the cohort-component method, information on mortality (age-specific survival probabilities taken from a life table) is used to make the current population survive from today (time t) to a point of time into the future (time t + n). Then, information on fertility, in the form of age-specific fertility rates, is applied to the reproductive age female population (the women between 15 and 49 years), in order to calculate the number of new births that will be added to the population between times t and t + n. Those newborns are thereafter made to survive as well, using the same source of information on mortality (i.e., the same life table). Finally, net migration rates by age-groups, either positive or negative, may be applied to intermediary calculations to obtain the final population projection results.

The various assumptions are obviously the key element in the preparation of cohort-component projections. Mortality assumptions are important, but those pertaining to fertility are crucial since fertility levels have the greatest effect on the size of population over time. Migration assumptions are difficult to make because migration trends are often volatile and sensitive to economic conditions that may change rapidly. Usually, assumptions on the various components of the growth of the population are *normative*. This means that they are based on the extrapolation of past trends in the country or in neighboring countries. Should that information be missing, assumptions are derived from the situation of countries with similar levels of socioeconomic development. One could assume, for instance, that in developing countries life expectancy at birth will improve by 1 or 2 years per person during every 5-year period and fertility will decrease by one child per woman in every decade.

However, population projection assumptions can also be based on the results of proposed interventions and programs; they are then called *policy-driven* assumptions. This means that the results of specific interventions and/or policy goals and targets, such as expanded immunization and family planning programs, are integrated

in the assumptions of the population projections. In order to design policy-driven assumptions, the preparation of population projection needs to be grounded in extensive analyses of the determinants of mortality, migration and, especially, fertility (see Chap. 8, *Focus: The Bongaarts Model of the Proximate Determinants of Fertility*).

Another approach, being piloted by the International Institute for Applied Systems Analysis (IIASA) in collaboration with Oxford University, is to prepare *science-based* projections by age, sex, and level of education attainment. The method is to consult as many experts as possible, therefore "democratizing" the process of population projecting, and ask these experts to provide their views on current and futures forces that will shape population outcomes. The consultations, which are facilitated by the use of the Internet, are conducted for five different demographic components, i.e., low fertility, high or stalling fertility, high mortality, low mortality, and migration. Emphasis is put also on education attainment, which is a strong predictor of future demographic outcomes because of its impact on fertility (Lutz 2011: 4–5; Lutz and KC 2011).

Two international organizations and one national statistical office prepare world population projections at country level, namely the United Nations Population Division, the World Bank, and the US Bureau of the Census (however, the World Bank no longer publishes its projections). Every year, the PRB issues a World Population Data Sheet, in the form of a poster, based mostly on the estimates of the national institutes of statistics around the world. The PRB also uses the UNAIDS' estimates on HIV/AIDS.

The most widely-used set of population projections are those released every second year by the UN Population Division for all countries of the world. These projections are routinely prepared along three main variants, namely Low, Medium, and High, which are differentiated by the pace of the fertility decline. A constant-fertility variant is also presented. The three main variants reflect the speed at which the country is expected to undergo its demographic transition. All variants make the same mortality assumption, i.e., steady improvements in mortality patterns over time. Finally, all variants use the same migration trends.

With respect to the UN projections,[15] the majority of the users tend to consider the results of the Medium variant as the most likely, whereas the results of the Low and High variants deserve equal attention since they point to uncertainties about the future. The users need to understand that the results are not predictions, but only projections, which are based on specific assumptions that need to be fulfilled for these results to be vindicated.

Moreover, population projections prepared by international organizations suffer from several shortcomings. First and foremost, they are not always prepared in a

[15] The new United Nations projections (the 2010 Revision) issued in 2011 use the median trajectory of the probabilistic projection of the TFR to inform the assumptions for the medium fertility variant. However, mortality is still projected deterministically. Additionally, the projections run until 2100 instead of 2050 as in the previous UN projections revisions.

transparent way and with the complete information from the countries. Due to the lack of reliable data, these organizations are sometimes forced to make their own assumptions. Since the projections will eventually generate demographic estimates that might influence measures of overall development (such as the Human Development Index), countries may disagree with some of these assumptions, in particular those pertaining to mortality levels. The countries' officials may feel that projection assumptions are not in line with the data they have collected and analyzed in-country, and that end results are unfair.

Second, international population projections also reflect international paradigms on the future course of world demographic trends. Before 2002, the UN Population Division adhered to the concept of the convergence of demographic trends and the stabilization of the world population (Guengant 2002: 9–10). This meant that fertility in all countries was assumed to decrease to the replacement level of 2.1 children per woman. The UN Population Division later used an even lower, arbitrary level of fertility at 1.85 children per woman.[16] It was assumed that countries with high fertility levels would experience fast fertility reductions and consequently would catch up with countries that are more advanced in their demographic transition. Mortality conditions would improve everywhere to the level of 70 years of average lifespan. Finally, countries would eventually have no migration balance.

Today, these optimistic assumptions are being replaced by a sober reexamination of demographic trends worldwide. It has become obvious that fertility levels have either declined more slowly than anticipated (as in sub-Saharan Africa) or declined to very low levels that were unanticipated (e.g., in Eastern Europe and East Asia). Mortality trends have also diverged and some countries even experienced a reversal of the declining trends as in sub-Saharan Africa and in Eastern Europe due to HIV/AIDS. It must be mentioned that the UN Population Division and the US Bureau of the Census have put considerable efforts to analyze and model the potential demographic impact of HIV/AIDS. Finally, migration patterns have become more difficult to predict as they are largely linked to the economic conditions of sending and receiving countries and are very sensitive to economic downturns.

Third, political or self-serving motivations may interfere at country level during the preparation of population projections. Population projections may be tampered with in order to increase or decrease the population and/or purposely misrepresent geographical and/or ethnical segments of the country. A smaller population may translate in a higher gross national income (GNI) per capita.

Fourth, population projection results are often theoretical. Only demographic trends are projected, irrespective of the socioeconomic, environmental, and political conditions of the countries. For instance, the United Nations Population Division prepares projections for small, landlocked countries, and in doing so is reaching staggering figures that are in no way realistic. In the case of Burundi, the 2008

[16] In its 2008 population projections (Medium variant), the UN Population Division assumes a global average TFR of 2.02 children per woman for the period 2045–2050; see United Nations (2009d): 10.

Revision of the World Population Prospects gives a population estimate of 14.8m people in 2050 (Medium variant), yielding a population density of 604 per sq. km. The same caveat applies to island-countries. For the Maldives off the Eastern coast of India, the population is projected to reach 455,000 in 2050 (Medium variant), yielding a population density of 1,528 persons per sq. km. Such projections do not take into account the probable consequences of global warming that will mostly affect low-rise islands. Unless these projections also include realistic assumptions on international migration patterns, their results remain conjectural (see www.un.org/esa/population/unpop.htm).

Fifth, projections calculated by international organizations are almost always prepared at national level using national assumptions. In some large countries, however, e.g., Brazil, China, India, and Nigeria, fertility levels may vary considerably between various parts of the country. Projections calculated at sub-national levels that are then added up to obtain national estimates may differ greatly from projections done nationally, using one fertility assumption nationwide. India offers a good example of such "bottom up" population projections.

Focus: Could India's Population reach Two Billion People?

India's population passed the one billion mark in 2000 and it stood at 1.2bn in 2010. The government of India has long been concerned about rapid population growth outpacing economic growth. India was the first country to enact a population policy in 1952. Its goal was to slow down population growth through a fertility decline to be triggered by an extensive family planning program. As a result of the policy, the total fertility rate decreased from about six children per woman in 1950 to less than three today.

However, the country is very large and diverse. Fertility levels vary greatly throughout the 35 states and Union territories. Large Northern states such as Bihar and Uttar Pradesh have high fertility levels, estimated at 3.9 children per woman in 2007. In addition, these states experience much slower declines in fertility. They also have very large populations that are larger than many of the 18 most populated countries of the world (the big countries). For instance, Uttar Pradesh has a population that is larger than Pakistan's, which has the sixth largest population in the world. On the contrary, Southern Indian states, such as Kerala, have gone through very rapid declines of fertility. This is explained by higher rates of literacy and education than in the North. Today, Kerala's fertility level is 1.7 children per woman.

National population projections for India are usually based on nationwide assumptions of the future course of the total fertility rate (TFR). Such projections assume that fertility will come down evenly throughout India and that the country will eventually experience replacement level fertility or even below-replacement fertility at the level of, say, 1.85 children per woman. However, in order to obtain a more accurate picture of India's future demographic trends, it is useful to calculate population projections state by state and then add up the results.

Such "bottom up" population projections calculated recently (Population Foundation of India and Population Reference Bureau 2007), present two scenarios. One scenario assumes that states with a current TFR above "two children" would see their fertility levels decrease to 2.1 children per woman and that fertility would then remain constant. The other scenario assumes that the TFR would decline in every state and Union territory until it reaches the level of 1.85 children per woman.

This exercise first highlights the impact of replacement fertility (at the level of 2.1 children per woman) on the overall population of India. Second, the projections demonstrate that "the effect of higher-fertility states on the national growth can be taken into account as

they grow larger in comparison to the low-fertility states" (Population Foundation of India and Population Reference Bureau 2007: 3). In other words, the weight of high fertility states brings the global population figures of India upward. According to these projections, India's total population in 2101 could vary between 1.9bn and 2.2bn, implying that India could reach the 2bn mark around 2070. It would then be the first and only country ever to have 2bn people.

For a long time, the preparation of population projections was a tedious and time-consuming exercise done essentially by hand or with the help of calculators. As mentioned, however, the availability of computers has greatly facilitated the production of population projections. Consequently, their use has changed markedly and population projections have become powerful and readily available tools that help enhance the policy dialogue on population and development issues.

Conclusion

During the past 50 years, the world has experienced an extraordinary diffusion of international population paradigms and ideas. This was achieved through the creation of numerous population institutions, as well as the organization of major international population conferences. Over the years, international efforts to enhance the monitoring of population trends and gather additional demographic information have reinforced this movement. In addition, the advent of computers has facilitated the availability of population projections, which have helped mainstream the use of demographic data into national strategies and planning documents.

The overall result of this process has been the building of a global consensus around major population and reproductive rights goals. International population conferences have helped disseminate knowledge and technical tools to address demographic issues. In this respect, population issues have become international concerns. However, this process has also brought to light severe ideological, political, and professional fracture lines. Diverse camps and coalitions have emerged and positions have become polarized. Pro-life groups clashed with pro-choice supporters, economists opposed family planners, conservatives fought liberals, and feminists were at odds with demographers. Furthermore, the HIV/AIDS epidemic has diverted resources from population and family planning programs. The adoption of the MDGs in 2000 was a missed opportunity to foster family planning within international aid efforts. Overall, the end result of this process was the emergence of a somewhat paradoxical situation, namely the dissemination of population ideas and paradigms around the world along with a much greater fragmentation of the population and reproductive health agendas, actors, and institutions.

Nevertheless, despite the controversies surrounding family planning and reproductive rights, the process of demographic transition went on unabated. With respect to fertility, the use of contraceptives has continued to rapidly increase

everywhere, although not in the least developed countries and sub-Saharan Africa (with the main exceptions of Bangladesh and Southern Africa, respectively). This demonstrates that in addition to policies and programs or lack thereof, other forces such as socioeconomic advances and ideational changes have played a major role as well.

The next chapter will analyze the population policies that were implemented in developing countries.

Chapter 6
Population Policies in Developing Countries

Knowing is not enough; we must apply.
Willing is not enough; we must do.

Johann Wolfgang von Goethe (1749–1832)
German writer and polymath

This chapter covers the broader population policies that were designed and implemented in developing countries during the period from 1974 until today. The heyday of these more comprehensive policies was in the 1980s and 1990s.

After the 1974 Bucharest Conference, developing countries continued to address high levels of mortality and especially fertility (Chap. 4 describes the initial efforts in these areas). To cope with high levels of fertility, most developing countries implemented family planning programs. Fertility levels started to decline, although induced abortion also played a role. However, traditional family planning programs changed after the 1994 International Conference on Population and Development (ICPD). The policy goal shifted to the implementation of the Cairo agenda, which put more emphasis on reproductive rights and helped address a range of new issues, including excision or female genital mutilation (FGM).

At the same time, population policies were gradually broadened to address, in addition to mortality and fertility, other components of demographic growth and their socioeconomic determinants. Population policies benefited from larger socioeconomic and gender-related interventions, including endeavors to foster female education. These gender-related interventions usually bring indirect effects on mortality and particularly fertility. Policies also tackled urbanization patterns, as well as internal and international migration flows, e.g., through internal resettlement programs as was the case in the Indonesian transmigration program. The impact of rapid population growth on the environment affected some countries, like Haiti. In the mid-1980s, countries also had to address the threat of the HIV/AIDS epidemic, in addition to issues that had been traditionally encompassed by the population policies.

The chapter first analyzes how family planning programs spread to developing countries, the role of abortion in the reduction of fertility (with a focus on Vietnam),

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_6, © Springer Science+Business Media B.V. 2012

and the adoption of the broader agenda of reproductive rights that superseded the implementation of the somewhat narrower family planning programs (as illustrated by the example of excision). Then, the chapter turns to the process of designing more comprehensive population policies, which targeted, in addition to mortality and fertility trends, the other components of demographic growth and their socioeconomic determinants, as was done in Mexico. At around the same time, gender and education issues also received more attention. Thereafter, the chapter reviews the policies of urbanization and internal and international migration (using the situation of Indonesia), as well as the emerging concerns regarding the relationship between population growth and the environment (with a focus on Haiti). Finally, the chapter covers the policies on HIV/AIDS that have been adopted since the mid-1980s.

Family Planning Spreads Around the World

After World War II, a few countries established family planning programs, with Japan and India among the precursors, followed later by Egypt and other countries. Subsequently, other countries, mostly in South and East Asia, also launched family planning programs (see Chap. 4). However, the outcomes of these endeavors were rather mediocre, especially in some of the 18 big countries (as defined in Chap. 2), for instance in Pakistan. At the time, these failures cast doubt on the ability of family planning programs to bring about fertility declines and questions were raised about the strategies to implement efficient family planning programs (Sinding 2007: 4).

In contrast, the two decades after the 1974 Bucharest Conference were dubbed the "golden era of family planning". In the 1970s and the 1980s, many more countries, mostly in Asia but also in Latin America and the Caribbean, designed and implemented family planning programs. This ushered a global family planning revolution that spread across the developing world and reached almost all corners of the globe, with the exception of the least developed countries (LDCs).

The agreement reached at the 1974 Bucharest Conference made this revolution possible. Dr. Karan Singh, the head of the Indian delegation in Bucharest, made the provocative statement that "development is the best contraceptive", which created a sensation. It seemed to espouse the views of those who insisted "that rapid population growth was a red herring invented by the Western powers to keep developing countries' populations under control" (Sinding 2007: 6).[1] Nevertheless, the conference concluded with a World Population Plan of Action (WPPA), which called for a mix of family planning and other development investments (Sinding 2007: 6–7). As Sinding summed it up: "despite the intense … debates of the Bucharest era, the vast majority of countries adopted population or family planning policies during the

[1] Dr. Singh explained later that "when he called development the best contraceptive, he had not considered it to be the only contraceptive." In 1992, he coined the new phrase: "Contraception is the best development"; see Visaria and Chari (1998): 69.

1970s and implemented [them] with varying degrees of enthusiasm and vigor through the 1980s and beyond" (Sinding 2007: 9).

The results were stunning. In 1960, 10% of the world's women of reproductive age (15–49) used a modern or traditional method of contraception. That number rose to 63% in 2008, of which 57% had adopted a modern method (Population Reference Bureau 2008). Asia, followed by Latin America and the Caribbean, led the contraceptive revolution. By 2008, Asia had a contraceptive prevalence rate (modern methods) of 61%, and the rate was 63% in Latin America and the Caribbean (Population Reference Bureau 2008). In the developing world (including China), fertility dropped from around six children per woman in the mid-1960s to about three children per woman in the 1990s (Sinding 2007: 7).

All this illustrates the spectacular progress in contraceptive coverage in about 50 years, particularly in developing countries. To a large extent, this success was the result of strong programmatic efforts to make contraceptives widely available. These included information, education, and communication (IEC) campaigns, training of family planning providers, establishment of delivery networks, and ample supply of commodities. In addition, family planning programs piloted innovative delivery mechanisms. A good example is the distribution of hormonal pills without a medical prescription, which was pioneered in Thailand in the late 1960s by Allan Rosenfield (1933–2008). His trial demonstrated the "safety and the effectiveness of the use of auxiliary midwives to prescribe oral contraceptives" (Rosenfield and Limcharoen 1972: 946).

All these efforts would not have succeeded without the strong support of many multilateral and bilateral institutions. Four organizations in particular played a pivotal role. First, the International Planned Parenthood Federation (IPPF) and its network of national associations devoted to family welfare, helped legitimize the very concept of family planning in many countries. Second, the United Nations Population Fund (UNFPA), which has a field presence in numerous countries, helped with technical expertise, funded reproductive health projects, and ensured the provision of contraceptive commodities. Third, among the bilateral donors, the US Agency for International Development (USAID) launched major programs of family planning, supplied commodities, and provided expertise through its cooperative agencies (i.e., private organizations contracted by USAID to perform specific projects or tasks). USAID also funded censuses, surveys, and policy work. Finally, the World Bank also funded major population and reproductive health projects in the form of loans and, more recently, grants.

The broader success of family planning is also linked to deep and rapid changes in attitudes concerning reproduction and sexuality, not to mention major improvements in socioeconomic development, urbanization, education, and women's status. In many developing countries, the demand for family planning services quickly increased because of better survival prospects for children. Additional factors played a major role as well, in particular the economic constraints linked to the cost of children's education and the influence of mass media (Westoff and Rodriguez 1995). Therefore, the need to adjust to new economic and social constraints and the rapid diffusion of new ideas complemented each other.

Family planning services, which were offered through specific programs, boosted the latent demand. Country-level and dedicated family planning programs brought about the dramatic increase in contraceptive use, which were well captured in the collection of essays on national family planning programs edited by Robinson and Ross (2007a). Many of the 18 big countries in Asia and Latin America designed and implemented large family planning programs in the 1970s and the 1980s.

These ambitious and systematic endeavors were implemented rather efficiently. In addition, programs were also well funded, continuously or at least without major interruptions, from the 1960s to the beginning of the 1980s. As already mentioned, the United Nations (particularly UNFPA), IPPF, USAID, and also the World Bank were major contributors. On June 16, 1970, the World Bank approved its first loan for family planning: an USD2m project to Jamaica, to support the government's family planning program. In addition to external funding, several countries earmarked large sums to family planning programs. In the late 1970s, the Ministry of Health in Taiwan allocated about 7% of its budget to family planning; in Nepal and the Philippines, it was about 10%; and in Indonesia, the funding level went up to 33% of health expenditures (Nortman and Hosfstatter 1978: 36–37).

Family planning programs have adopted two different "models". A strong governmental commitment to family planning was the main reason behind the success of many Asian programs. This implied a strong participation of the public sector, with a top-down and sometimes authoritarian implementation. Public policies also promoted smaller families, as was the case in Bangladesh, China, the Islamic Republic of Iran, and Vietnam (United Nations 2006b: 13). On the contrary, the other implementation model relied on a larger involvement of the private sector, in the form of specialized NGOs. This model was more prevalent in Latin America and the Caribbean, and was also adopted in Ghana. It favored the distribution of contraceptives through private sector groups, which were able to overcome the opposition of the Catholic Church in Latin America. Large NGOs, such as PROFAMILIA (*Asociación Probienestar de la Familia Colombiana)* and BEMFAM (*Bem-Estar Familiar no Brasil*), were instrumental in spreading the very concept of family planning and promoting its adoption. These NGOs also succeeded in setting up family planning services in hostile environments, dominated by socially conservative values. Often, small groups of specialists or even activists (sometimes helped by the firm commitment of the highest political authorities), were able to overcome the public's reservations and accelerate social change.

In their collection of essays, Robinson and Ross (2007a) document a number of successful family planning programs. Among these, the Indonesian program stands out as it served a large population. The program faced major challenges, such as political Islam and nationalistic economic planning that were gradually replaced by forces supporting family planning, namely secular authoritarianism and modernizing technocratic planning (Hull 2007: 244). The Chinese program, which is not covered in the volume edited by Robinson and Ross, served the largest population in the world. However, the program was not without serious flaws because of its coercive nature (see Chap. 8, *Focus: The Chinese Experiment*). Similar problems (e.g., massive campaigns of sterilizations) occurred in the family planning program

of India during "The Emergency" (1975–1977).[2] However, these issues were usually addressed rapidly and led to a fresh start of right-based approaches to family planning (Harkavy and Roy 2007: 311–312).

Two of the most efficient and non-coercive family planning programs ever implemented took place in large Muslim countries, namely Indonesia and the Islamic Republic of Iran, and this deserves a closer examination.

In 1970, the government of Indonesia decided to institutionalize its family planning program, meaning that the effort would be permanent. Accordingly, the government created the *Badan Koordinasi Keluarga Berencana Nasional* (BKKBN). This organization, which grew into a major government agency with thousands of staff across the nation, followed an interesting management and functional model. Dr. Haryono Suyono, the BKKBN Chairman, apart from being responsible for the agency and program as a whole, essentially managed upward and engaged all potentially relevant players with regard to the population policy goals. The Deputy-Chairman managed downward and pursued BKKBN's mission specifically with regard to family planning and reproductive programs' implementation, including engagement with Indonesia's clinical professions (e.g., obstetricians and gynecologists), as well as various other family planning and health-care clinical and public health cadres that were subsequently introduced into the program (Niehof and Lubis 2003: 31–56).

This combination turned out to be unusually effective, with the BKKBN Chairman attaining Cabinet rank and direct access to Indonesia's President, who politically, culturally, and economically gave the program strong backing. As such, the Chairman secured support from the Military, the ministries of Finance and Economics, the Department of the Interior, and the various island administrations ("Inner and Outer Islands"), as well as endorsement by the country's private sector (e.g., pharmaceutical industry, the media, academia, and Indonesia's cultural and religious leaders).

The BKKBN Deputy-Chairman implemented clinical and public health family planning programs. Securing support of the country's medical profession was crucial and the academic, provincial and district-based gynecologists and obstetricians became involved in family planning efforts. The professionals perceived family planning interventions as in their own interests and created an important sense of technical identity of all those working in family planning across the country. Along with the national and macro-level ownership of the country's population policy, a family planning leadership and self-sufficiency atmosphere ensued that gave rise to an Indonesian family planning industry for the production of both contraceptives and analytical tools needed to monitor the program.

The two approaches combined in a third dimension that importantly contributed to the effectiveness of the program. The engagement by the BKKBN with cultural and religious leaders and the sophistication of the various family planning messages

[2] In the 1990s, a sterilization campaign, which was too aggressive and misinformed potential clients, marred the family planning program of Peru.

and methods led to the introduction of "small family size" encouragements and references to "how to achieve this by using contraceptives" in the texts and theatrical compositions of the Indonesian and Javanese shadow plays. The social acceptability of family planning methods as part of Javanese and Indonesian culture became one of the best practices worldwide of ensuring the compatibility of social and cultural norms with the technical, economic, and political dimensions of population and family planning policies.

Following the 2000 financial crises and political upheavals in Indonesia, the population and family planning programs and the BKKBN were decentralized, with provincial and local decision-making paramount. BKKBN's role and influence have since diminished considerably. Nonetheless, in its heyday, BKKBN helped trigger a sharp decline in fertility: the total fertility rate (TFR) dropped from 5.3 in 1970–1975 to 2.6 in 1995–2000 (United Nations 2009d: 278).

The success of the family planning program of Iran is even more striking. In only 22 years, the Iranian program contributed to decrease fertility from 7 children in 1984 to 1.9 children in 2006, and even as low as 1.5 children in Tehran (Abbasi-Shavazi et al. 2009: v). The first family program in Iran was initiated in 1967 under the regime of Mohammad Rezā Pahlavi, Shah of Iran (1919–1980, Emperor 1941–1979). However, Iranian authorities reverted to pronatalist policies during the Iran-Iraq War (1980–1988). The second Iranian family planning program was launched in 1989. At that time, the religious chiefs supported vigorous family planning campaigns. A *fatwa* or religious ruling of the Ayatollah Ruhollah Khomeiny (1902–1989, 1st Supreme Leader of Iran from 1979 until his death) had approved of contraceptives as early as 1980. Men took on a greater sense of responsibility for child rearing, a change that was fostered to a large extent by the religious establishment.

The rapid decline of fertility can be attributed to profound socioeconomic transformations, including mortality decline, rapid urbanization, and the adoption of important agrarian reforms. In addition, female education attainments and female participation rates in the labor force increased dramatically. All these factors created a demand for fertility limitation. After the late 1980s, the delay in the onset of childbearing, which resulted in fertility-inhibiting tempo effects, also contributed to push fertility levels downward.

The legacy of this program could be jeopardized by the declarations of President Mahmoud Ahmadi-Nejad before the Parliament in October 2006. He condemned the recent achievement of the two-child family and urged Iranian legislators to take steps to boost the country's population, essentially for nationalistic purposes (Minou 2006). This seems hard to achieve, given the dynamics of the demographic transition. In addition, Iranian women are not quite prepared to give up the reproductive freedom they have gained recently.

Notwithstanding remarkable advances of family planning in many developing countries, success has not been achieved uniformly. The contraceptive revolution did not reach the 49 LDCs, with the main exception of Bangladesh. In terms of fertility decline, the LDCs lagged behind other regions of the world by almost half a century. Despite the successes of family planning programs in South Africa and Zimbabwe, sub-Saharan Africa as a whole has a contraceptive prevalence rate (modern methods)

of only 17% (Population Reference Bureau 2010a). Two of the big countries of the region, namely Nigeria and the Democratic Republic of Congo, still do not have efficient family planning programs (Ethiopia boosted its programs in recent years).

The struggle to bring family planning to sub-Saharan Africa is best illustrated with the example of Kenya, where fertility reached 8.1 children per woman in the late 1960s (United Nations 2009d: 298). The Kenyan experience offers insights into the limitations of supply-driven family planning programs, the importance of socioeconomic factors to trigger fertility declines, and the complexities of the social and cultural context in that part of the world. Nevertheless, Kenyan authorities were the first in sub-Saharan Africa to launch, as early as 1967, a national family planning program to reduce high fertility levels. This was in sharp contrast with neighboring Uganda, where top political leaders ignored demographic challenges for too long (Blacker et al. 2005).

However, initial political support for the population policy of Kenya was lukewarm. The population policy was reenacted in the form of a Parliament Sessional Paper No. 4, issued in 1984 (Chimbwete et al. 2005: 88). Yet, despite important investments family planning, fertility did not decrease significantly until the late 1980s. This has led several specialists to consider Kenya's population policy a conspicuous failure. Critics contended that other types of measures were not sufficiently encouraged, such as an agrarian reform, the strengthening of governmental services at local level, and gender-sensitive family laws including a better inheritance system for women and the possibility for them to own land. All these steps, so goes the argument, could have reduced sooner fertility levels or at least the size of the desired family (Frank and McNicoll 1987: 222–226).

Indeed, population interventions initially focused on the promotion of family planning services by strengthening the health system. The goal was to establish numerous health facilities and make them more accessible through a network of new roads. These efforts took time, however, and the results were not perceived at once. In reality, the mere supply of family planning services did not trigger the onset of the fertility decline. Fertility levels eventually started to decline thanks to an array of socioeconomic factors, namely the improvement in female literacy and the decrease in infant and child mortality rates, but also the higher cost of education (schooling fees, uniforms, and school supplies). Despite the financial burden, Kenyan families adjusted to these new factors and kept their children at school. Large families were no longer considered advantageous (Kelley and Nobbe 1990).

By the late 1980s, very significant changes had occurred. The number of channels to obtain contraceptives and health professionals that were trained in family planning grew rapidly. Mass media campaigns are believed to have contributed to the increased use of contraceptives, and demographic and health surveys (DHS) showed that increased exposure of women to family planning messages was conducive to greater use of modern methods (Westoff and Rodriguez 1995: 26). The DHS conducted in 1989, showed for the first time an important drop in fertility levels. This success was confirmed by subsequent DHS surveys. The total fertility rate was estimated at 6.7 children per woman in 1989, at 5.4 in 1993, and at 4.7 in 1998 (these numbers refer to the 3 years preceding the surveys). In the early 1990s, all

health facilities in the country were providing family planning services, in addition to child and maternal health-care services. The demand of contraception for limiting births had become greater than the demand of contraception for spacing only. Contraceptive prevalence rates increased even faster in rural regions (especially in the Western part of the country) than in urban areas. The latter were plagued by a proliferation of shantytowns and a worsening of poverty levels.

However, survey data indicated that the fertility decline stalled in the late 1990s, a reality felt in other sub-Saharan countries (although the fertility decline appears to have resumed in Kenya very recently). This "period of no significant change in fertility before the country reaches the end of the transition" (Bongaarts 2008: 108–109) was probably linked to shortages of funding for commodities, and perhaps mismanagement of the family planning program. It could also be argued that the spread of HIV/AIDS epidemic became a major concern, especially in terms of sexual and reproductive health. This, as well as the recent stall in the decline of infant and child mortality caused in part by lower vaccine coverage between 1993 and 1998, could have weakened the family planning program.

Kenya's very active Christian churches and Muslim associations, which were opposed to family planning, have resented the political authorities' efforts to reduce fertility. The delicate subject of adolescents' sexuality and their access to contraceptive information and services further polarized the debate. Religious groups even went as far as to organize several public burnings of condoms and educational material on family life (for example, in the Uhuru Park in Nairobi in 1996). It is the opposition from these groups that delayed the adoption of a new document on the national population policy for a sustainable development (Sessional Paper No. 1 of 2000).

Regularly, Islam has been cited as a constraint to the diffusion of family planning. Actually, many Muslim countries (except in sub-Saharan Africa) have succeeded in rapidly lowering their fertility levels. In some Muslim countries, however, conservative forces have recently gained a stronger hold over civil legislation and, in particular, family policy. The more conservative elements of these societies strive to impose an interpretation of the Quran and Tradition that goes against the use of modern contraception (Omran 1992). These constituencies have instead advocated pronatalist policies, diminishing the rights of women and generally opposing the social change that comes with economic development, which they consider to be imported from the West and contrary to Islamic values.

Islam, which encompasses one-fifth of the world population, is not structured or centralized like the Catholic Church. The main sources of Islamic doctrine are the Quran and the *Sunnah* (the sayings and deeds of the Prophet Mohammed and his Companions). Based on these, but subordinate to them, are two other sources: the consensus of Islamic jurists and analogy (Roudi-Fahimi 2004). Interpretations of the Quran and the Tradition are not dictated by the clergy (with the exception of the Shi'ite tradition), but by Islamic law doctors and/or by assemblies of wise men, whose religious authority vary according to the region and the political power in place. Their teachings are then relayed by local assemblies in mosques. Therefore, Islam's attitudes regarding modern contraception are far from unanimous. It is

sometimes difficult to define an Islamic family planning doctrine, since truth in Islam is not the monopoly of any particular school (Roudi-Fahimi 2004).

Nonetheless, there is no fundamental Islamic opposition to modern contraceptive methods, as sexual relations within marriage are not meant only for the purpose of having children. As Islam stresses the importance of family and its tranquility, the use of contraceptive methods is seen chiefly as a means to have children when they are wanted and when spouses are prepared to have them. Consequently, a series of declarations and texts by diverse Islamic authorities, mosques, and education centers show a general acceptance of modern contraceptive methods. However, Islamic jurists generally do not condone the permanent methods of female and male sterilization (Roudi-Fahimi 2004).

To conclude, one must stress that several countries have achieved outstanding success in their family planning programs, when fertility declined sharply and rapidly. At the same time, however, others countries experienced mixed results, with fertility rates declining at a much slower pace. Inevitably, the social, economic, political, and institutional systems in place influenced both the policies and implementation of family planning programs. Furthermore, these characteristics, in addition to the program's design, structure, and management, are unique to a particular country at a particular time. For all these reasons, the outcomes of family planning programs are not chronological, linear, or even predictable (Robinson and Ross 2007a: 421).

The Role of Induced Abortion

Throughout history, induced abortion, i.e., the premature artificial termination of pregnancy has been used to end unwanted pregnancies. Induced abortion must be distinguished from spontaneous abortion (including stillbirth, a natural outcome for a small proportion of pregnancies; see Henshaw 2003: 529).

With respect to induced abortion, countries' regulations vary widely from more restrictive to less restrictive abortion laws. In very few countries, including Chile, Dominican Republic, El Salvador, Malta, and Nicaragua, abortion laws are most restrictive, usually with no explicit legal exception even if a woman's life is at risk. In less restrictive settings, on the contrary, induced abortion may be permitted for five reasons or groups of reasons. The first three are: to save the life of a woman, to preserve physical health (and save a woman's life), and to preserve mental health (and the two preceding reasons). Induced abortion can also be authorized on socioeconomic grounds and for all three preceding reasons. Lastly, induced abortion can be legal without restriction as to reason (i.e., available on request), but with gestational and other limits (Singh et al. 2009a: 50). Some countries have added rape, incest, and fetal impairments as legitimate reasons to seek an abortion.[3]

[3] A comprehensive review of abortion laws and regulations at country level can be found in Francome and Vekemans (2007).

It is difficult to measure the prevalence of induced abortion almost everywhere since statistics do not capture all procedures, and this is the case in particular in countries where abortion is legally restricted or highly stigmatized. Therefore, it is problematic to assess the impact of induced abortion on fertility levels. However, two approaches may help to shed some light on the issue. First, one can assess the availability of abortion through an examination of the laws that regulate it, although these stipulations are not static and may evolve. Second, one can use abortion statistics that are collected in countries where abortion is less restricted although the quality of such reporting may vary widely. For countries where abortion is more restricted, however, one can only rely on indirect estimates, e.g., from hospitals records (Henshaw et al. 1999b: S35).[4]

In 2003, an estimated 41.6m induced abortions (safe and unsafe) occurred worldwide. Unsafe abortions account for about half that number and almost all unsafe abortions occur in developing countries (Sedgh et al. 2007a: 1338; Singh et al. 2009a: 4). Approximately 22% of these 41.6m procedures have taken place in developed countries. It is estimated that, on average, one pregnancy out of four is terminated by an induced abortion. At a worldwide scale, a woman will have an average of one induced abortion during her reproductive life. In 2003, it was estimated that 29 out of 1,000 women of reproductive age had an induced abortion (Sedgh et al. 2007a: 1338), down from an estimated 35 out of 1,000 in 1995 (Henshaw 2003: 529). Overall, more countries experienced in recent years a decline in legal abortion rates than an increase (Sedgh et al. 2007b: 106).

In developing countries, abortion statistics are either complete (in principle) or incomplete (or at least of unknown completeness). Again, comparisons are very difficult because not all countries have complete abortion reporting. For the period 1975–1996, the data show wide variations in rates of legal induced abortion (numbers of induced abortions for 1,000 women of childbearing age).[5] Rates ranged from less than five in Bangladesh and India (where most abortions are unsafe), to more than 70 in the late 1990s in Cuba and Vietnam. In China, where data are also incomplete or of unknown completeness, rates have varied between 27 and 56 over the same period. In Tunisia, where such data are believed to be complete, rates decreased over the span of 22 years to reach less than ten. These data highlight another noteworthy trend: the decreasing incidence of abortion in the former socialist countries of Eastern and Central Europe (Henshaw et al. 1999a: 46).[6] These very diverse rates reflect the different ways women control their fertility during the fertility transition and once the transition is completed.

[4] Currently, the best data on induced abortion are those collected and analyzed by the World Health Organization (WHO) and the Guttmacher Institute. The Center for Reproductive Rights (see http://reproductiverights.org) provides information on its own programs around the world. The latter two organizations are headquartered in New York.

[5] Another measure of induced abortion is the total abortion rate, or the average number of induced abortions per woman, a measure comparable to the TFR.

[6] The high prevalence of induced abortion in Eastern European and former communist countries stems from the old Marxist prejudice against contraceptive methods, seen as Malthusian instruments.

From a fertility perspective, induced abortion has occasionally played an important role in fertility declines observed in developing countries (e.g., in Bangladesh, India, Nepal, and also in several countries in sub-Saharan Africa), especially when family planning programs have offered abortion as an accessible service. The demand for, and therefore the incidence of, induced abortion has probably increased in countries that experienced rapid declines of fertility and where contraceptive use was not yet firmly established (Henshaw 2003: 530). Some countries, which put into place efficient family planning programs, like Tunisia, were able to somewhat minimize the number of induced abortions, although the procedure was made widely available and free of charge. However, other countries like Vietnam, experienced large numbers of induced abortions. This was a consequence of a very rapid decline in desired fertility, as well as deficiencies in the range of the contraceptive methods being offered (the family planning method mix).

Focus: Induced Abortion and Menstrual Regulation in Vietnam

In 1901, Vietnam had 13m inhabitants. More than a century later, in 2010, its population was estimated at 87.3m, a sevenfold increase. Population density is high: 268 inhabitants per sq. km on average (Population Reference Bureau 2010a), but it is four times higher in the two great deltas (Scornet 2000: 265). Vietnam is not highly urbanized (28% of the population), but urbanization has accelerated since the 1986 economic liberalization known as the *Doi Moi* (renovation). About 10% of the population consists of ethnic minorities.

The government of the Democratic Republic of Vietnam (the communist North) launched a family planning program in 1962, and reinforced it after its victory over the South in 1975. This authoritarian program promoted the two-child norm. It relied essentially on intra-uterine devices (IUDs) (adopted by 51% of women using contraception) and traditional methods (especially withdrawal). As traditional methods are less reliable, they result in numerous unwanted pregnancies. Couples then have to resort to induced abortion, as do couples who do not use contraception.

This trend worsened with a Decree of the board of ministers adopted in October 1988, which set the size of the Vietnamese family to "one or two children". In 1993, the government enacted a policy to expand the family planning program (Resolution of the 4th Plenum of the Central Committee of the Vietnamese Communist Party). This top-down policy aimed to reach replacement fertility in 2015 (i.e., 2.1 children per woman) (Goodkind 1995). In 1997, the government decided to accelerate the process, and decreed that replacement fertility was to be reached as soon as 2005. As a means to achieve this goal, abortion was integrated into Vietnam's family planning program (Johansson et al. 1996: 103).

Fertility levels declined considerably. The total fertility rate went down from 4.5 births per woman for the period 1980–1985 to 2.08 for 2005–2010 (United Nations 2009d: 496). Induced abortion played a significant role in this decline, particularly in urban areas. In the early 1990s, each Vietnamese woman underwent an average of 2.5 abortions during her reproductive life, which is more than the number of living children born per woman during the same period (Hoang et al. 2008: 145). Induced abortion became a major public health problem – Vietnam still has the third highest abortion rate in the world.

The family planning policy ensured that abortion was available upon request at commune health centers (CHC). Menstrual regulation (MR) was the preferred form of abortion and was performed at a very early stage of pregnancy, up to 6–8 weeks of gestation (Nghia and Khe 2001: 10). In 2005, it is estimated that MR represented 77% of all abortions in Vietnam (Bélanger and Thi Hai Oanh 2009: 165). Originally, MR referred to vacuum aspiration of

the uterus as treatment for women who have missed a menstrual period (Kessel et al. 1975: 731). Although attitudes are changing with younger generations, abortion is considered immoral in traditional Vietnamese culture. Nevertheless, MR is perceived as being more acceptable because it is performed early in a pregnancy, when the fetus has not begun to form (Nghia and Khe 2001: 10). Until 1995, MR was broadly accessible and was "performed routinely", without a pregnancy test prior to the procedure (Nghia and Khe 2001: 6). In 2001, the cost of MR in public sector facilities was low, at one to two US dollars. For low-income women who did not use modern contraception, MR was performed without charge. In Vietnam, induced abortion is generally cheaper than modern contraceptives (condoms or the pill). As a consequence, abortion is a default or complementary method of contraception for most women (Nghia and Khe 2001: 10).

Numerous interrelated factors contributed to this situation. The two-child policy significantly influenced the system of financial incentives and disincentives used by some local authorities to achieve the population policy target. According to Johansson et al. (1996), a rural village authority in Thai Binh Province enforced fines of 200–250 kg of rice when a couple gave birth to a third child. But couples respecting the two-child norm were awarded 20 kg of rice per year until the end of a woman's reproductive life. Similar rewards were given to women who had an IUD inserted or underwent an abortion. Another village, comparable in socioeconomic terms, was less strict with its disincentives, yet abortion rates were higher (Johansson et al. 1996: 104). Additionally, Vietnam has gone through significant changes in its socioeconomic context, which also contributed to the increase in abortion rates. The desire for smaller families is widespread and financial concerns with increased education and health costs for additional children are put forward as a main motivation to seek the procedure (Johansson et al. 1996: 104).

The high level of abortion is both alarming and revealing of failures in the family planning policy as well as its delivery mechanisms. Key factors are the insufficient availability of a wide range of contraceptive methods and the lack of adequate counseling. While it is stipulated in the population policy that individuals have the right to select which contraceptive method they want to use (but they have the obligation to use one), IUD is the dominant modern contraceptive (Hoang et al. 2008: 145). In the study by Johansson et al. (1996) in Thai Binh Province, many women revealed difficulties with the methods of contraception available. They mentioned the side effects of IUDs and the lack of other methods, which led them to stop using IUDs and modern contraception altogether (Johansson et al. 1996: 106).

This is illustrated by second trimester abortions, which are legal until 22 weeks of pregnancy. Hoang et al. (2008) performed research in two hospitals, and revealed that the majority of women seeking second trimester abortions were young and unmarried. These women had not received education on sexual or reproductive health, had failed to determine they were pregnant, and often did not believe they would become pregnant following rare sexual encounters. The delivery of these services were frequently inadequate as providers "often treat unmarried women seeking abortions badly", leading some women to have private unsafe abortions (Hoang et al. 2008: 146–147).

Despite its heavy human cost, the family planning policy in Vietnam has been considered a success because fertility has declined significantly. A detailed financial analysis of the program using the averted birth method was made in 1997 by the National Committee for Population and Family Planning (1997). It showed that the program became profitable as of 1996, considering the savings made in the sectors of education, health, and social services. Family planning programs have had positive effects, yet the striking numbers of induced abortions demonstrate the need for improvement. Indeed, many investments are still necessary to enhance the quality of the services, offer a wider choice of methods, use financial resources more efficiently, and develop data collection and analysis.

Toward Reproductive Rights and Reproductive Health

The 1994 ICPD heralded the change from a narrow definition of family planning to the larger concept of reproductive rights[7] (Ashford 1995; Eager 2004).

This change was backed up by two hypotheses. First, it was assumed that the optimal fertility of individuals and couples (fertility close to replacement level) could best be obtained if people and couples could exercise their freedom in reproductive matters. Consequently, people and couples had to become the central concern of family planning programs. Second, fertility is dependent on many other health and development variables, namely levels of infant, child, and maternal mortality, the physical integrity of women, educational attainments of young girls, needs of adolescents, and levels of poverty (Finkle and McIntosh 1994: 3–34). Moreover, the notion of reproductive rights was probably perceived by many governments as less intrusive and threatening than the classic and sometimes heavy-handed family planning programs of the past. The concept of reproductive rights was therefore endorsed by the Cairo Conference (Goldberg 2009: 103–120; Halfon 2007: 63–82), despite heated debates around the issue of induced abortion.

The ICPD proposed the following definitions of reproductive rights and health, the description of the former being based on the definition of health proposed by the World Health Organization (WHO) (Summary of the ICPD Programme of Action, Chapter VII; see http://www.unfpa.org/icpd/summary.cfm):

> Reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other relevant UN consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. They also include the right of all to make decisions concerning reproduction free of discrimination, coercion and violence. Full attention should be given to promoting mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality.
>
> Reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system and to its functions and processes. It implies that people have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this is the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility, which are not against the law, and the right of access to health-care services that will enable women to go safely through pregnancy and childbirth. Reproductive health care also includes sexual health, the purpose of which is the enhancement of life and personal relations.

Reproductive rights cover a large domain. First, the application of rights to sexual and reproductive matters does imply the fulfillment of many conditions

[7] The innovative "humanistic family planning" concept advocated by Chōjirō Kunii (1916–1996), who founded the Japanese Organization for International Cooperation in Family Planning (JOICFP), predated the reproductive rights approach adopted in Cairo by two decades.

(legal, social, economic, etc.) that must be met in order to foster those rights. Key to this new approach is the empowerment of women, and providing them with broader choices through expanded access to education and health services, as well as promoting skills development and employment. The ICPD stressed *individual* rights, in addition to rights of the couples. This emphasis on individual aspirations of men and, particularly, women echoes the struggle of the pioneers of birth control in the early twentieth century, who had fought hard to assert the individual sexual and reproductive freedom.

Second, the large scope of the concept of sexual and reproductive health implies that specific programs address many different dimensions. The Cairo agenda, as the ICPD's assertion of reproductive rights has become known includes three main areas: eight components of the reproductive health (RH) service package, four additional RH components, and another set of three additional components. The first area covers family planning, maternal, infant and women's health care, infertility prevention/treatment, abortion (prevention and complications), reproductive tract infection (RTI) and sexually transmitted disease (STD) treatment, breast and cervical cancer screening and referral, human sexuality, and harmful practices such as early marriage and female genital mutilation (FGM). The second group of additional RH components includes adolescent RH, gender-based violence, men's RH, and gender. The additional components include child health/child survival, elderly women/menopause, and nutrition (UNFPA 1999: 5). To address these multiple dimensions, reproductive health programs need to cover pre-natal care, safe delivery, and post-natal care, as well as education and counseling on human sexuality and responsible parenthood. Moreover, specific services regarding HIV/AIDS have been added to this already long list. Finally, reproductive health programs also include interventions to address the issue of the vesico-vaginal fistula (VVF).

Reproductive health programs have been very active in discouraging the practice of excision or female genital mutilation (FGM), which is sometimes called female genital cutting (FGC) in an effort to avoid judgment. The tragedy of FGM is vividly depicted in *Desert Flower*, the heart-breaking testimony of Waris Dirie, a Somali woman who was excised when she was a child. She fled her country, became eventually a top-model in the West, and served as a United Nations FGM Ambassador (Dirie and Miller 1999; D'Haem and Dirie 2003).

Focus: The Scourge of Excision

> Around the word, approximately 120m women suffer from the consequences of excision or FGM, and every year two million new girls are affected by FGM (the procedure is performed until the age of 15). FGM is prevalent in about 30 countries in sub-Saharan Africa and the Middle East, as well as in some parts of Asia and the Pacific (Utz-Billing and Kentenich 2008). FGM prevalence varies greatly from one country to another, from 99% in Guinea to 20% in Senegal (FGM figures are available from the Demographic and Health Surveys, which carry modules on excision). FGM is sometimes found also among African women settled in industrialized countries.

According to the WHO definition, FGM involves the complete or partial non-therapeutic removal or injury, for cultural or religious reasons, of external female genitalia. The WHO has classified FGM into four major types: (a) excision of the tip of the clitoris, (b) total or partial removal of the clitoris, with or without excision of the *labia minora*, (c) infibulation, which is the partial or total removal of all external genital organs, including the *labia majora*, and the closing of the vaginal canal (this is the form mostly used in the Horn of Africa), and (d) all other harmful procedures to the female genitalia for non-medical purposes.

The procedure can have serious and sometimes even fatal consequences. Immediate outcomes can include severe bleeding, wound infection, sepsis, urinary tract infection, and fistula. Long-term consequences include recurrent bladder and urinary tract infection, anemia, cyst, infertility, increased risk in childbearing, scar tissue, and incontinence (Utz-Billing and Kentenich 2008: 225). Scar tissues can disrupt childbearing and women may be at a higher risk for prolonged delivery, which in turn may impact adversely the health of the unborn child and the mother. Occasionally, the practice may contribute to the spread the HIV virus when the same instrument is used to cut several girls.

Apart from physical harm and injury, FGM can also cause mental pain and anguish, affecting the young woman's role in society. Usually, the procedure is performed by traditional excisors; however, more medical professionals are now involved. This is known as the "medicalisation of FGM". In 2006, data suggests that nearly 50% of the procedures were carried out by physicians (Utz-Billing and Kentenich 2008: 228). Participation of medical professionals may help reduce risks of infection, bleeding, and immediate dangerous outcomes of FGM, but it does not help reduce the overall incidence of FGM nor does it eliminate its consequences.

The social consequences of FGM can be quite traumatizing for young women. Some of the physical afflictions caused by the procedure, such as incontinence, make it difficult for the young women to engage in normal social life. FGM can result in feelings of incompleteness, fear, inferiority, and suppression. These feelings may pervade the women's entire lives. After experiencing FGM, women are at a greater risk for depression and other psychiatric disorders (Utz-Billing and Kentenich 2008: 227). Although attitudes are changing in some cultures, there is a belief that girls who are not excised cannot be married. Many families that make the decision to have their daughter excised are just conforming to social norms. In *Facing Mount Kenya* (1938), Jomo Kenyatta (1894–1978, first President of Kenya from 1964 to 1978), equated male and female circumcision as a necessary initiation to manhood and womanhood (Kenyatta 1965: 128). The following reasons are given to undertake FGM: "encouragement of the patriarchal family system, method for birth control, guarantee of moral behavior and faithfulness to the husband, protection of women from suspicions and disgrace, initiation ritual, symbol of femininity and beauty, hygienic, health, and economic advantages" (Utz-Billing and Kentenich 2008: 225).

In 2006, among 500 Nigerian women surveyed about the reasons for FGM, all but 5% invoked culture and tradition in the decision to have young women undergo the procedure, and almost half of the women said that FGM prevents promiscuity. Other reasons were aesthetics (18%), preventing the death of male newborns (11%), and social pressure (9%). Only 6% of women said that religion was the reason behind submitting to FGM (Utz-Billing and Kentenich 2008: 226). This holds true with the fact that FGM is not associated with, nor dictated by, Islam (Halila et al. 2009: 70).

FGM is acknowledged as a human and children's rights violation. The global response to FGM includes information, education, and communication (IEC) campaigns, reaching out to those who perform the procedure, and convincing the parents of young girls to give up on traditional practices. Increased IEC efforts are coupled with new laws addressing FGM. Emphasis needs also to be placed on the sensitization of men about the adverse effects of FGM, given the patriarchal nature of societies where it is practiced. The economic empowerment of women, health education, and vocational training for traditional excisors, so that

they may have alternative sources of income, are key elements of eradication programs (Asekun-Olarinmoye and Amusan 2008: 296).

In Senegal, the NGO Tostan, which means "breakthrough" in Wolof, has made significant headways in working with communities to end the practice. Tostan's work was initiated in a village by an American woman who has lived and worked in Senegal since 1974. The purpose was to "empower African communities to bring about sustainable development and positive social transformation based on respect of human rights" (see www.tostan.org). In the process, women began speaking out about the health consequences and pain of FGM. This collective awakening led to a village-wide discussion. Eventually, the entire village voted democratically in 1997 to end the practice. This decision created incredible tension in the social network – which local leaders used as an opportunity to extend the initial decision to 13 more communities. These communities came together in 1998 in the first "public declaration" – a moment that social scientist have highlighted as critical to Tostan's work, since it allows social norms to publicly shift (a similar method was used to end foot binding in China over a century ago). Today, over 4,100 villages in Senegal have publicly declared an end to harmful practices like FGM and forced early marriages. The Tostan movement has now spread to other countries in sub-Saharan Africa.

The Tostan "model" is hailed as one of the most promising strategies for ending excision. Tostan uses careful terminology and avoids judgmental, discussion-ending terms like "mutilation" in order to move beyond defensive reactions. The approach focuses on providing the necessary health information and underlying concepts (like the germ theory) for individuals and communities, enabling women and girls to share their stories and discuss the new information, empowering communities to share this information within their extended social networks, and coordinating the all-important public declaration – the visible moment of change. Indeed, for change to occur with regard to ancient ingrained traditions, it needs to come from within the community.

Intimate partner violence,[8] most often of women, is another abuse. This violence toward women prevents them from expressing their choices concerning reproduction, and puts them in a position of inferiority to negotiate intercourse and the advent of pregnancies. This makes them especially vulnerable in countries hard-hit by the HIV/AIDS epidemic. The situation of young girls who, for economic reasons, give in to the advances of older men ("sugar daddies"), and that of women subjected to rape (in conflict situations) are other ever-present concerns. Gender-sensitive interventions will improve reproductive health outcomes and specifically help reduce unintended pregnancies, improve maternal health, reduce HIV/AIDS and other sexually transmitted infections (STIs), eliminate harmful practices, and meet the needs of youth (Rottach et al. 2009: 10).

Too often, adolescents are denied the right to be informed in matters of reproductive health and to have access to contraceptives. Adolescents represent an important part of the population in countries with young age structures. In a typical sub-Saharan country, the age group of 10–24 year-old represents at least 30% of the total population. Denying adolescents access to contraceptive information and services means inevitably paying later a heavy price at societal level, in the form of unwanted pregnancies, induced abortions (that often take place in dreadful conditions), and high

[8] Intimate partner violence (formerly called domestic violence), is a part of gender-based violence.

prevalence of HIV infection. A solution to these problems is to implement programs specially designed for adolescents, and centered on the moments during their lifecycle when they are most vulnerable (Mensch et al. 1998).

Another tragedy of the developing world is the very high rate of maternal mortality. The maternal mortality ratio (MMR) measures, for 100,000 live births, the number of women who die from maternal death, defined as the death of a pregnant woman or the death of a woman caused by the pregnancy or its aftermath (up to 42 days after giving birth). Even if every pregnancy carries its risks, there are huge disparities in this indicator around the world. Actually, the MMR is the health indicator that shows the *widest* variation across regions of the world. In 1995, the lifetime risk of maternal death was a staggering 1:16 in sub-Saharan Africa, but only 1:3,500 in Northern America (Maine and Stamas 2003). In developing countries, this risk was globally estimated to be one in 48, while in industrialized countries it was only one in 1,800 (risk assessed by WHO and published in 1998). In absolute value, it was estimated that more than half a million women (515,000 in 1995) die every year of direct or indirect complications due to a pregnancy or a delivery (Hill et al. 2001). However, this estimate was recently reduced to about 350,000 in 2008 (Hogan et al. 2010: 1609; WHO, UNICEF, UNFPA and The World Bank 2010: 1).

Several major international organizations have launched an international initiative to reduce maternal mortality levels. This initiative was inaugurated during the International Conference on Safe Motherhood held in Nairobi in 1987, under the auspices of the World Bank. The goal was to reduce the risks and disparities associated with pregnancy in developing countries by 50% by 2000. More than 20 years later, it must be acknowledged that initial objectives have not been fully reached, despite important successes in several countries (e.g., China, Egypt, Honduras, Malaysia, Sri Lanka, and Tunisia). The reason is the complexity of interventions necessary to reduce maternal mortality. Two things are required: first, women exhibiting danger signs must be taken to qualified health professionals, but this decision still too often depends on the will of the husband and in-laws. Second, qualified personnel (doctors, midwives) must be available, as well as blood banks and obstetric services capable of handling the complications. Between these two points, transportation must be available as well (roads, means of transport, and gas), which is often a challenge in isolated rural regions. The lack of family planning services is another contributing factor to high levels of MMR, since women who are denied contraception may rely on unsafe abortions. These deficiencies may cause up to 30% of maternal deaths.

The 1994 ICPD Programme of Action advocated making family planning universally available by 2015 or sooner, as part of a broader approach to reproductive rights. The Programme also provided estimates of levels of national resources and international assistance that would need to be mustered to achieve this goal. The Programme called on governments to make these resources available. However, the implementation of this tall order was less than optimal. First, funding did not match rhetoric. Many countries did not invest in reproductive health services in a systematic or comprehensive way. Very seldom have their efforts been sustained over time. Moreover, some big countries, such as China and Vietnam, only timidly subscribed

to changes endorsed in Cairo. Second, population programs since 1994 strived to satisfy personal needs of people and couples. By doing so, however, they lost sight of the global picture and the huge programmatic and logistical requirements needed to serve large, burgeoning populations. Third, the broad reproductive rights agenda with its many different components has been parceled out to a large number of different implementers (e.g., NGOs). These picked up isolated aspects of the overall reproductive health agenda, without adopting a holistic approach. As a result, the implementation of the reproductive rights agenda remained fragmented and unfocused.

Today, more than 500m couples in the developing world are satisfied family planning users. Yet it is estimated that 215m women worldwide want to avoid a pregnancy but are not using an effective method of contraception, despite increases in use in recent years (Singh et al. 2009b). Demand should rise dramatically in the next decades as record numbers of young people enter prime reproductive ages.[9] The unmet need for family planning is particularly acute in the least developed countries. It is therefore urgent to redirect efforts on the key priorities within the larger framework of reproductive health services. Among these priorities, it appears that five key elements should belong to any effective reproductive health program: family planning, maternal health, children's health, prevention of HIV/AIDS and STIs, and violence against women.

Some authors also promote the concept of reproductive security, which encompasses an analysis of reproductive risks to help households manage these risks. Reproductive security can be achieved through: healthy reproductive behaviors; supportive community norms, systems, and structures; making institution-delivered services accessible, of high quality, and well managed; using appropriate health technologies in the areas of contraception, maternal health care, and HIV/STD management; and designing supportive public policies (Middleberg 2003: 19).

The Broader Scope of Population Policies

In addition to mortality and fertility, population policies also had to address the other components of demographic growth and their socioeconomic determinants. Consequently, the scope of population policies has widened.

This expansion took place against the backdrop of the three periods identified by Finkle and Crane (1990) (see Chap. 5, section "International Population Paradigms"). The second period, the population planning approach, indirectly led to the preparation of more comprehensive national population policies, but broader population policies were also adopted during the third period, i.e., the competitive pluralism approach.

[9] See http://www.fpconference2009.org/2201.html, the Web site of the International Conference on Family Planning: Research and Best Practices, held in November 15–18, 2009 in Kampala, Uganda.

Since 1976, the United Nations regularly gathers and analyzes information provided by member and non-member states regarding their perceptions of population trends and their population policies. These data are published in the *World Population Policies* reports (United Nations 2010c; see Chap. 5, section "Improvements in Population Monitoring"). In 2009, a majority of governments (87%) viewed the HIV/AIDS epidemic as their most significant demographic issue. Among developing countries, the second and third most important issues were high mortality in childhood (before age 5) and high maternal mortality, respectively. Developing countries are also concerned about their working age population, as they need to create jobs for rapidly expanding labor forces. Developed countries were concerned with population aging and HIV/AIDS and, to a lesser extent, low fertility (United Nations 2010c: 7).

Overall, governments are increasingly concerned with consequences of population trends. Gradually, they have become "more inclined to view population as a legitimate area of government action and to act upon these concerns by formulating and implementing policies which address these issues" (United Nations 2008a: 31). Since the 1974 Bucharest Conference, policies have addressed a broader spectrum of issues, covering population size and growth, population age structure, fertility and family planning, health and mortality, spatial distribution, and international migration. More developing countries, particularly in sub-Saharan Africa, believe that both population growth and fertility rates are too high. Policies and programs have also been reoriented toward the implementation of the Programme of Action that was adopted at the 1994 ICPD. With respect to family planning, this meant addressing life-cycle reproductive rights issues encompassing both sexes, instead of focusing solely on women of reproductive age. The implementation of the goals and objectives of the ICPD Programme of Action would contribute significantly to the achievement of the MDGs (see Chap. 5, section "The Millennium Development Goals"). Policies were less successful with respect to urbanization and population distribution. Finally, governments came to recognize that international migration and development issues are closely linked (United Nations 2008a: 32).

A striking feature of the United Nations' successive inquiries is the generally slow evolution of governments' positions with respect to population policies. Between the activism of a few determined countries in East and South Asia and the stagnation of population policies in French-speaking sub-Saharan Africa, other countries have seen their population policy evolve gradually. Mexico is an example of a country that can be described as intermediary in its approach to population issues. The Mexican government eventually showed a strong will to mitigate rapid population growth. However, this came after a long period of introspection, during which population accommodation approaches often superseded fertility reduction policies (Alba and Potter 1986).

Focus: The Slow Maturation of Mexico's Population Policy

When Emperor Maximilian I of Mexico (1832–1867, Emperor from 1864 until his death) was executed, the country had a population of ten million. In 1900, Mexico had

13.5m inhabitants and the 2000 census accounted for 97.4m inhabitants. In 2010, Mexico has 109.6m inhabitants, i.e., eight times more than at the beginning of the last century. The population growth took place despite an important slowing down during the depopulation crisis of the revolutionary years (1910–1920). Population growth then accelerated again, especially after World War II, and the importance of the demographic issues came to the fore.

During the 1960s, Mexico had a TFR of approximately seven children per woman, a very high level when compared to international norms at the time. In 2010, the TFR is 2.3 children per woman, a spectacular decline considering the strong Catholic traditions (even if the state has been secular since the revolution) and high poverty levels. The efficiency of the population policy and program is undeniable and is illustrated by the fast rise of the contraceptive prevalence rate (all methods): it went from 30% in 1976 to 71% in 2010, of which 67% are modern methods.

The Mexican authorities went through five distinct stages in their attitudes toward rapid population growth (Cosio-Zavala 1994: 102–210):

- Pre-transition years, from 1936 to 1950, during which the government encouraged population growth and the development of the country's less populated regions with, among others, a spatial redistribution program (1936s first General Law on Population), the goal being to integrate Mexico's indigenous populations economically and socially into the Mexican melting-pot;
- Transition years, from 1950 to 1973, when were voiced the first concerns regarding overpopulation, and thoughts were given to revising the old policy. During that period, Mexico had a population growth of 3.1–3.4% per year, one of the highest in the world at the time. The policy was not yet anti-natalist, and family planning was introduced for the first time in 1959;
- From 1973 to 1978, the government passed population laws and created population institutions. Among them, a General Law on Population (1973), and a *Consejo Nacional de Poblacion* (CONAPO), which worked on policies to mitigate rapid population growth and redistribute the population through internal migration, essentially a population accommodation approach. Three large cities, Mexico, Monterrey, and Guadalajara, then accounted for a third of the country's population. The 1993 modification of the Constitution allowed contraception, a move the Catholic Church did not oppose. Again, the ultimate goal of this policy was to come close to full employment when the less numerous newborns would enter the labor force. This period may be viewed as one of population control and integration of the demographic variable in the development planning process;
- From 1978 to 1994, the programs' activities expanded and increased in efficiency, especially in the area of family planning. These results were obtained by adhering to quantified objectives (an annual population growth of 1% was to be attained by 2000). In 1984, the International Conference on Population held in Mexico gave a new impetus to national efforts; and
- Finally, since 1994, Mexico has tried to apply the recommendations of the ICPD, in particular those concerning reproductive rights.

Due to the inertia of demographic phenomena, Mexico's population policy did not yield immediately a fast deceleration of the population growth rate. However, the reduction of the population growth during the last decade of the twentieth century has been important: 2.1% in 1990–1995, and 1.6% in 1995–2000. Strong internal migrations to the cities until 1980 and massive emigration toward the US during the last 30 years have absorbed the high population growth surplus (it is estimated that about 10% of the Mexican population lives abroad). The relatively large size of the country also provided some room to maneuver while waiting for results of the program to curb fertility. To a large extent, the initial decline in fertility was brought about by the population policy (Alba and Potter 1986: 69). However,

it must be acknowledged that the economic crisis of the 1980s (the "lost decade") and the impoverishment of a segment of the population contributed also to the fertility decline (Cosio-Zavala 1994, 2006).

Broader population policies were designed in sub-Saharan Africa, where the demographic transition came much later than in other parts of the developing world. Sub-Saharan governments prepared prescriptive texts to try to accelerate the demographic change. Official population policies were enacted, in the form of comprehensive documents endorsed by high-ranking authorities (e.g., President, Cabinet, or National Assembly). Emulation played a part in this process as countries exchanged opinions and experiences, which accelerated the adoption of such policies.

Population policy documents in sub-Saharan Africa usually tackle at once all the problems linked to population and development.[10] As a result, they sometimes lose track of key priorities and actions. Fertility reduction, the essential goal of most population policies, could be obtained through the synergy of activities to promote family planning, children's survival, girls' education, and the improvement of women's status. However, in addition to these activities, most population policies in sub-Saharan Africa propose scores of recommendations that have no direct influence on demographic variables (regarding industry, commerce, and so forth). This shows a desire, more frequent in sub-Saharan Africa than elsewhere, to sugar-coat family planning interventions within broader development policies and programs (May 2001). In addition, those countries often lack sufficient political commitment and adequate financial resources to implement appropriate programs (United Nations 2008a: 32).

Gender Issues and Indirect Actions on Fertility

Gender can be defined as social roles performed by individuals, based on their sex. Gender is increasingly acknowledged as a fundamental social relationship and an important component shaping all societies. Gender roles and relations affect every aspect of one's life: health, education, economic opportunities, and power exercised (Riley 1997: 6–13). Gender assigns a woman or man to a particular role, determines relations among them, and provides a different status to both. A significant characteristic of gender is that it is a social construct, and therefore it can change. Gender issues result from gender roles, and often manifest themselves in inequalities between sexes. A prominent gender issue today is the feminization of HIV/AIDS epidemic, with women being infected at a higher rate than men. This recent

[10] An exception is the short population policy declaration adopted by Niger in February 2007, which combines reproductive rights approaches à la Cairo with quantified programmatic objectives; see Republic of Niger (2007).

development is a reflection of cultural and social factors[11] related to gender roles (UNFPA 2005b: 37). In almost all societies, women have been assigned a gender role placing them at a disadvantage, in terms of education, health, employment, and legal status. Although there have been considerable improvements in many parts of the world, gender inequality and discriminatory trends toward girls and women are still dominant (UNFPA 2005b: 1). This manifests itself in various forms across societies. In developing countries, and significantly in sub-Saharan Africa, the high maternal mortality rates and women's persistent lack of control over their own fertility and reproductive rights are symptoms of their vulnerable position (Simwaka et al. 2005: 708).

Addressing gender in socioeconomic policies and mainstreaming its relevance for development and social transformation has gained ground over the past decades. As a consequence, improving relations between genders, empowering women, and seeking to reduce gender inequality have become important development priorities. The MDGs reflect this in their development policies. The third MDG goal, to "promote gender equality and empower women", and the fifth MDG goal, to "improve maternal health", both address implicitly the unfavorable status of women. In fact, gender is connected to the achievement of all MDGs and the empowerment of women greatly contributes to their progress (UNFPA 2005a: 6–7). Women's rights, including equality, are of undeniable value and should be pursued on the simple grounds that they represent basic human rights. While this is reason enough to include gender equity in policies, realizing equity is necessary for all other societal objectives to be achieved. Increasingly, developmental professionals recognize that gender plays a major role in reaching other MDGs and achieving socioeconomic development more generally (see Chap. 5, section "The Millennium Development Goals").

In 1994, the ICPD Programme of Action established that women's empowerment is crucial in addressing population and development (UNFPA 2005a: 1–3, paragraph 3.16):

> Particular attention is to be given to the socioeconomic improvement of poor women in developed and developing countries. As women are generally the poorest of the poor and at the same time key actors in the development process, eliminating social, cultural, political and economic discrimination against women is a prerequisite of eradicating poverty, promoting sustained economic growth in the context of sustainable development, ensuring quality family planning and reproductive health services, and achieving balance between population and available resources and sustainable patterns of consumption and production.

The ICPD focused as much on the empowerment of women as it did on population policies. It was agreed that women were a priority as they made up the most affected group in this regard (Singh 2009: 101). The bearing of gender has particular

[11] However, there are also physiological reasons that contribute to higher infection rates among women; see UNFPA (2005b).

resonance when considering reproductive health, family planning, and population issues. Gender dynamics have consistently been associated with changes in population trends.

There is an abundance of evidence supporting that fertility decline, and therefore population growth, is closely linked to better access to education, especially for girls (Hanushek 2008: 24; UNFPA 2005b: 10). A woman's fertility decreases by one child with each additional 4 years of education, according to Klasen (Tembon 2008: 281). Educated women tend to delay marriage and pregnancies, use reliable contraceptive methods, and have smaller families. Intergenerational benefits also emerge from education, as educated women are likely to send their own children to school (Tembon 2008: 281). When access to education improves, child health and maternal health also improve significantly, as does the protection of women from HIV/AIDS (Hanushek 2008: 24; UNFPA 2005a). Additionally, education enhances the participation of women in the labor force while improving economic outcomes (Tembon 2008: 5). Hence, education plays an important role in the empowerment of women, and contributes to women gaining control over their fertility and reproductive health.

Linkages between gender inequality, poverty reduction, and population issues are further highlighted when considering the effects of girls' education. In Bangladesh, the TFR was seven children per woman in 1975 and decreased sharply to less than 2.5 by 2010 (Cleland et al. 1994; Population Reference Bureau 2010a). The government implemented a strong family planning program in 1975 (see Chap. 9, *Focus: Bangladesh's Fertility Transition in a Poor Setting*). Yet this intervention alone did not account fully for the decreasing TFR. Higher female enrollment in primary and secondary levels also took place at the same time, and today female enrollment in secondary education exceeds that of males in most of the country (World Bank 2008: 3). Education contributed to improving the position of Bangladeshi women, boosted female participation in the labor force, and changed family size preferences (World Bank 2008: 3). Therefore, the empowerment of women through education complemented the family planning program in improving reproductive health outcomes. Further, the ownership obtained by women of their own fertility and reproductive rights translated into beneficial changes in other social and economic sectors. For instance, the system of micro-credit, which originated in Bangladesh, strengthened income prospects for women who increasingly joined the labor force and accessed formal employment (World Bank 2008: 3).

In South Korea, the fertility transition had a wide-ranging impact on the lives of women. There is a generational difference between older and younger women who experienced the benefits of fertility transition, including access to higher education. The transformation in reproductive rights led women to "adjust reproductive behavior to work-life, at the same time, adjust work-life to reproductive health and plans", highlighting the control women had over their fertility and professional desires (Park et al. 1998: 2). Further, the transition improved women's self-esteem and status and permitted more flexible gender roles and identities, including a more equal division of labor in the household. It also improved gender relations and enabled women to fulfill themselves outside child rearing and household roles (Park et al. 1998: 3–6).

Aggravating impacts of poverty on women's reproductive health are generally acknowledged, yet it is also important to stress the effect of improvements in reproductive health on poverty reduction. Early childbearing, high maternal mortality and morbidity, and large family size resulting from unintended pregnancies are all aspects of women's reproductive health, which result from, and exacerbate poverty in developing countries (Greene 2008: 2). These elements negatively affect women's overall health, likelihood to pursue an education, and household well-being in general. A woman's health does not only affect her, but also her children. Malnutrition of children and lower rates of school enrollment are prominent in households where the mother has suffered morbidity or has died. Similarly, research has shown that the death of a woman in a household will negatively influence income and consumption levels (Greene 2008: 6). Accordingly, reproductive rights and related gender issues are essential components of poverty reduction efforts. The effectiveness of poverty reduction efforts can be undermined by gender-based inequalities, which is the case in Southern Africa (Lopi 2004: 6).

While there is formal commitment to gender equity in policy, these efforts are less tangible when looking at the effective implementation and resource allocation of these policies (Chiwara and Karadenizli 2008: 8). In 2005, WHO showed that the MDG with the least amount of progress was the one for maternal health, which now also includes universal access to reproductive health (MDG Target 5b). Poor results were especially evident in sub-Saharan Africa, arguably the region that needs improvements most urgently (Simwaka et al. 2005: 708). The average maternal mortality ratio in Africa was 910 per 100,000 live births in 2006, and it was estimated at 1,600 in Niger, 1,700 in Angola, and 1,800 in Malawi for the same year (WHO 2006a, b, c). These figures highlight the need to address gender issues and suggest that reproductive rights are a significant measure of gender inequity (UNFPA 2005b: 3). This should be a priority for the well-being of women and to improve prospects of socioeconomic development.

To conclude, gender does not only involve women. Men are an important part of the equation and need to be integrated adequately in the process of women's empowerment. Additionally, gender issues affecting men are also an integral part of addressing gender dimensions (Riley 1997). The position of men is often insufficiently appreciated when considering reproductive rights and gender issues. Family planning services and reproductive health efforts often target women because getting access to men and mobilizing their attention can be less effective. Furthermore, gender relations are a major component of gender issues. Silberschmidt's research in Kenya on gender relations in the Kisii region established that these relations were marked by struggles between men and women (Silberschmidt 1999: 170). While women were facing the difficulties of providing food, school fees, and health costs, men were struggling with their identities as breadwinners in an economy that did not enable them to provide sufficiently. In this case, the expression of their frustrations resulted in violence against women. Silberschmidt's analysis highlights the exclusion of men from the gender discussion while revealing their difficulties, which in turn affect both sexes (Silberschmidt 1999: 172). Therefore, both men and women need to be included in solutions to gender issues and the empowerment of women.

Policies on Urbanization and Internal and International Migration

In addition to the size, the age structure, and the natural components of the demographic growth rate (i.e., mortality and fertility), urbanization and internal and international migration (within and across borders, respectively) are also key characteristics of any population. These movements affect the population's spatial distribution and density, as well as the demographic pressure on the agriculture, natural resources, and the environment. Migratory movements also have an impact on the demographic net growth and on socioeconomic development more generally. Therefore, population policies also need to take urbanization and migrations into account.

Urbanization and Internal Migration

A significant feature of the twentieth century has been the extensive and rapid urbanization globally (United Nations 2007b: 22). Today, it is estimated that 50% of the world population is urban (United Nations 2010e: 1). Whereas the majority of the population in developing countries still lives in rural areas, urbanization has been especially rapid in this group since the 1950s (United Nations 2010e: 1). The United Nations estimates that the world's rural population will peak at 3.5bn in 2020, followed by a decline to 2.9bn in 2050 (United Nations 2010e: 4). The world's urban population is expected to encompass most of the population growth by 2050, when it is projected to reach 6.3bn as the world total population attains 9.15bn (United Nations 2010e: 4). China and India are expected to account for the significant increase in the urban population (United Nations 2010e: 12). This trend suggests that by 2020, the majority of the population in developing countries will also reside in urban areas (Brockerhoff 2000: 3).

The relationship between urbanization and economic development is a dynamic one although there is little information on how exactly the interaction works (Cali 2008: 4). Moreover, rapid urbanization can be viewed either as a positive development or as a process that brings negative consequences.

The most common view is to understand urbanization as a process indicative of, and expanding with, economic development. The transition from a primarily rural population engaging in agricultural activities to an increasingly urban population turning to employment in industry and services is most often viewed as inherent to economic development (Cali 2008: 2). The logic behind this is that economic development, technological progress, and increased agricultural productivity lead to a surplus of labor in rural areas. This brings individuals and businesses to urban areas in order to seek or create employment and opportunities in different industries (United Nations 2007b: 22; United Nations 2010e: 14). The ensuing agglomeration of people and businesses is then assumed to lead to further economic growth and

development. In 2009, projections show that 80% of the gross domestic product (GDP) worldwide will be generated from urban areas (United Nations 2010e: 14). Migration to urban areas is therefore desirable for those in rural areas seeking better opportunities, and concentration of productive activities in urban areas has been a fundamental driver of urbanization (Waters 2007: 237; United Nations 2010e: 14). According to the United Nations, "the countries with higher levels of urbanization have tended to have higher per capita incomes, more stable economies and stronger political institutions". The data show that this has been the case for both developed and developing countries (United Nations 2007b: 22).

However, it is also true that the process of urbanization can be negative and take place without economic growth. A striking example is the case of Zimbabwe, where the GDP growth rate was catastrophic at a rate of −5.7% per year during the period 2000–2008, while the annual rate of change of the urban population was 2.2% (World Bank 2010a). In this scenario, the negative side of urbanization emerges as it creates significant obstacles and challenges for human and economic development. A major issue is the rural–urban divide in many developing countries, which fosters inequality. This can be related to what is often called the "urban bias" or "agricultural squeeze", i.e., the notion that urban areas benefit from more investments and that resources, as well as capital, are concentrated there at the expense of rural areas. As rural areas are put at a disadvantage and face difficulties to develop, agricultural populations are eventually "squeezed" out of these regions.[12] From this perspective, rapid urbanization is a significant factor in the persistent poverty and marginalization of those living in rural areas. In 2002, according to the United Nations, approximately 75% of the poor lived in rural areas (United Nations 2007b: 22). Solutions that have been suggested include more investments in smallholder agriculture, providing more financial opportunities for women, and generating means to diversify incomes (Hazell et al. 2007: 1; Karshenas 2001: 339–340).

Migration to urban areas does not guarantee improved socioeconomic prospects. A second human development concern resulting from intensifying urbanization is the increasing level of urban poverty (United Nations 2007b: 22). Slums host an increasing proportion of urban populations in developing countries. In 2005, it was estimated that 37% of the urban population in these countries were living in shantytowns (Population Reference Bureau 2010a). The combination of the population's natural growth rate and the expansion of rural–urban migration accounts for high rates of urbanization and the proportional increase of the urban population experiencing poverty. While the expansion of slums reveals growing poverty concerns, the density and overcrowding involved in rapid urbanization also imply health risks, environmental degradation, pollution, and generally precarious living conditions. The Kenyan capital Nairobi embodies much of the problems related to urban poverty and slums. The urban population is growing rapidly and

[12] Nevertheless, there is a "new rural paradigm" emerging from the urban bias idea, which claims that rural areas are receiving more subsidies and investments than they previously did; see United Nations (2007b): 22.

the vast majority of the 60% that reside in slums struggle to survive and meet basic needs (UN-HABITAT 2005). These people have minimal access to food, water, schools, and health care. Shelter is extremely deficient and the "urbanization of poverty" is unmistakable (UN-HABITAT 2001, 2005).

Governments have put into place various policies to address the challenges of both urbanization and internal migration. The most widespread type of policies has been aimed at reducing and, if possible, inverting rural–urban migration to main cities and other agglomerations. These include diverse schemes, for example the development of certain regions to change migration patterns as well as checks on migratory movements within countries (United Nations 2010e: 13). The latter is illustrated by the *hukou* internal residency permits in China initiated in the 1950s, through which the government wanted essentially to control migratory movements to the East coast. Under this system, roughly 160m migrants working in urban areas cannot register (in principle) as city residents. This deprives them of income support, subsidized housing, and schooling opportunities for their children (often left behind anyway). However, the *hukou* system has not been strictly enforced in recent years.

According to the United Nations, approximately 70% of countries with data available in 2007 implemented urbanization and rural–urban migration policies and 83% expressed the wish to make changes in the spatial distribution of the their populations (United Nations 2008a: 24). This is especially true in developing countries, and particularly in Africa, where 77% of countries try to curb internal migration (United Nations 2010e: 13). Some countries tried to decentralize by relocating their capital cities. Both Nigeria and Tanzania shifted their capital from Lagos to Abuja and from Dar es Salaam to Dodoma, respectively. In 1960, Brazil also adopted a brand new capital in Brasilia. Starting in 1975, Egypt sought to create new cities in the desert East of the Nile Valley to deal with the crowding of Cairo, but achieved only mixed results (Robinson and El-Zanaty 2006: 116). Other, less popular policies included those aimed at encouraging urban–rural migration and urban-urban migration (United Nations 2007b: 24).

As a response to urgent demographic pressure, the government of Indonesia implemented a program of transmigration from an overpopulated part of the country to other rural areas. Transmigration or resettlement programs consist of relocating populations, usually in the same country, in order to reduce population pressure in the region(s) of origin (Hugo 2003: 854). These programs are most often complemented by regulatory and financial measures to enable a smoother reinsertion of the migrants. However, such relocation programs are difficult to implement. They are also controversial because they disrupt the traditional living conditions of the affected populations. Sometimes, they can have a negative political connotation (coercion, lack of equity, and violations of freedom), and also be harmful to the environment.

Focus: Transmigration Programs in Indonesia

The population or spatial redistribution program undertaken in Indonesia, the fourth most populated country in the world, illustrates several problems inherent to resettlement policies. Close to two-thirds of the Indonesian population lives on the islands of Java and Bali,

which account for only 9% of the country's total area. These islands' densities are 20 times higher than those of the archipelago's furthest islands, where the resources in land and energy (oil) are to be found. By comparative illustration, the population per sq. km of Bangladesh, the most densely populated country in the world (excluding city-states), amounts to more than 1,000 persons per sq. km, while Java has 978 people per sq. km (2010 figures).

Migrations to less populated islands, especially toward Northern Sumatra had already been organized by the Dutch colonial authorities before World War I. Migration schemes were also accompanied by voluntary migratory movements. During the second Five-Year Plan of 1974–1979, transmigration programs were systematically organized by the government (resettlements were part of the successive development plans). A total of 52,000 families "transmigrated" from Java and then another 360,000 families (about 1.5m people) during the next Plan (1979–1984). An additional 170,000 families migrated outside the government's transmigration program. This was made financially possible by the abundance of oil resources, but the Indonesian government financed also part of the program with loans/grants from the World Bank (World Bank 1988).

The fourth Plan was even more ambitious and called for the internal migration of 750,000 families from Java to the "outer islands". It came up against several problems, such as a decline of oil profits, and a scarcity of land in the regions that were to receive the migrants. During the fifth Plan (1989–1994), only 180,000 families received help to migrate, but twice as many migrated on their own. At the beginning of the program, poor families from Java were moved to Sumatra, Kalimantan, and Sulawesi. In theory, each family received 2 ha of land, a modest lodging, some equipment, and a food ration for the first year, as well as transport (one way). However, often the land was of poor quality: in many cases it could barely ensure the minimum subsistence for families. The program also had to take into account the protection of the environment, the cost of developing the land, and recriminations of the native inhabitants in receiving areas.

Considered to be the largest voluntary redistribution project in the world,[13] the Indonesian transmigration project has also sometimes been denounced by its detractors as an attempt to "javanize" the country, a policy which the Indonesian government actually was often quite explicit and open about. As expected, the influx of Javanese in many instances created political and ethnic tensions in receiving regions. Other critics asserted that human right considerations had not been addressed properly. The most virulent critics came from groups attached to the conservation of the environment, the protection of native populations, or simply opposed to the regimes of Presidents Sukarno (1901–1970, Indonesia's first President from 1945 to 1967) and Suharto (1921–2008, President from 1967 to 1998). Moreover, the program was not fully extended to the Irian Jaya region because of the tense political situation in the Western part of the island of New Guinea.

On the whole, this transmigration program was a relative success, at least quantitatively. From 1974 to 1994, the Indonesian program resettled a total of 650,000 families or about 3m people. To a large extent, these people benefited from the resettlement program. A large portion of these families enjoyed a better quality of life, even if accurate measurement proves elusive. As most families who migrated were poor, the program offered an alternative to joblessness and poverty. From a demographic perspective, however, the Indonesian plan had a modest impact by absorbing only 15% of Java's population growth. Tangible results were limited as compared to ambitious initial objectives and, more importantly, the large number of Javanese. On its own, spatial redistribution is hardly a viable solution to rapid population growth.

[13] For a comprehensive discussion of *involuntary* resettlement issues, see World Bank (1994c).

International Migration

International migration has emerged as an important trend since the early twentieth century, and has rapidly accelerated in the past decades. There were globally 191m migrants in 2005 and the number of migrants in developed countries doubled between 1985 and 2005, increasing from 55m to 120m (Martin and Zürcher 2008: 3). International migration is expected to continue increasing significantly in the future due to inequalities (local, regional, global), economic disparities, and other pressures such as high population densities or situations of conflict. Contemporary international migration is facilitated by enhanced transportation and communication, allowing migrants to travel easily and benefit from established social networks in foreign countries.

Although dealing with this fast growing form of migration is a significant concern for governments, most people still live in the countries where they were born. Only 3.1% of the world population engages in international migration, and this includes forced migrants (United Nations 2009b). Forced migration is a complex part of international (and regional or local) migration, yet generally refers to refugees forced across a border due to violence or conflict. However, one should add other features such as natural disasters (environmental refugees) and severe economic deprivation as significant engines of forced migration.

There are different factors motivating those who become international migrants, often referred to as the push and pull factors. *Push factors*, elements prompting the migration from a particular place, include unemployment, poverty, population pressure, conflict, or persecution. *Pull factors*, elements motivating the migration to a certain destination, include tangible or perceived job opportunities, improved living standards, family reunification, and security. Push and pull factors (to be combined with the network factor) are often complementary and can evolve with the experience of international migrants, as well as over time. Government policies inherently influence these factors as a means to control and often reduce migration flows to and from their countries. Policies facilitating immigration for a particular group, whether it is cheap labor from Turkey as done in Germany after World War II or highly skilled individuals (e.g., in the United States), tend to increase the pull of a country. Likewise, improving opportunities such as education, job creation, and better basic services in a developing country would in theory reduce the push factors. The concept of development-oriented approaches to limit emigration from developing countries has indeed been put forward by the European Union (EU) to address its immigration concerns (Kohnert 2007: 3).

Until the early twentieth century, the vast majority of migrants originated from Europe. This trend shifted after World War II and Europe increasingly became a destination for international migrants. Today, the most significant flow of international migrants is South-North migration, from developing to developed countries. The concentration of international migrants is increasingly in developed countries (United Nations 2006a: 1). In 2005, it was estimated that 62m migrants left a developing country for an industrialized one (Martin and Zürcher 2008: 3). The push and

pull factors can clearly be applied to this type of migration when considering differences in employment, services, population pressures, and security between developing and developed countries (Martin and Zürcher 2008: 4). Such disparities have historically motivated migration of substantial size and similar large-scale migration can be expected to occur again. In the twenty-first century, many international migrants seeking better lives in developed countries are likely to originate from Africa.

Widespread poverty, environmental degradation, insufficient employment prospects, and important incidence of violent conflicts have operated as push factors in the past and are likely to do so in the future, especially for younger generations. Developed countries, significantly European ones, represent a geographically close pull. In fact, most African migrants outside the African continent are in Europe (Kohnert 2007: 7). For the year 2005, the International Organization for Migration (IOM) estimated that 4.6m Africans were registered as residing in the EU. The real figures are probably larger, as the proportion of African migrants without adequate documentation or legal status is increasing. Some experts believe that "population movements from Africa could evolve into one of the largest in world history in the medium and long term" (Kohnert 2007: 6).

Although a great deal of attention is paid to South-North migration in domestic and international policy (see, for instance, the in-depth study of migration from Morocco and Mexico by Iskander 2010), South-South migration is close behind as a major part of international migration. Indeed, migration between developing countries is only slightly lower than migration from developing to developed countries. It is estimated that 61m migrants in 2005 left a developing country for another (Martin and Zürcher 2008: 3). In West Africa, significant international migration takes place between clusters of countries. In 1995, 28% of the population in Côte d'Ivoire originated from neighboring countries such as Burkina Faso, Mali, and Guinea. Historically, seasonal migrants from neighboring countries came to Côte d'Ivoire to work in cocoa plantations, and some of these migration patterns have remained despite the political turmoil. Because established borders are recent in many parts of the developing world, and especially in Africa, internal and international migration patterns are linked and tend to complement each other (Adepoju 2006: 27). In South Africa, international migration has evolved since the end of Apartheid in 1994, yet some major characteristics remained. Immigrants from neighboring Mozambique or Lesotho tend to migrate as laborers for low wages and live at a survival level without real prospects to thrive in the country of destination, which was also the case during Apartheid. Today, however, a significant change has taken place since increased numbers of highly skilled individuals went to South Africa to enjoy the benefits of its growing economy. Interestingly enough, the perception of opportunity in South Africa is attracting migrants with different skills and levels of education (Adepoju 2006: 40).

More organized forms of migration characterize current South-South migration trends. Out-migration of women from Asian countries to the Gulf for domestic work is a well-documented example. The number of temporary migrant workers (with fixed-term contracts) to the Gulf countries, both male and female, is very high

relative to their population. The total population of the Gulf countries in the late 1990s was of 27.7m and temporary migrant workers represented approximately 10.6m, hence represented more than a third of the total population (Shah 2004: 183). There has been a progressive and significant increase of women from Asian countries, especially from Sri Lanka and the Philippines, doing domestic work in the Gulf to the extent that they are the majority in the labor market of this sector. Typically, Asian temporary migrant workers receive low wages and are only permitted to migrate to the Gulf without their families. Their remittances are a significant contribution to their home country's foreign exchange (Shah 2004: 183). Policies favorable to immigration at this level are quite exceptional. The migrant population's contribution to the workforce and economy is undeniable and necessary for Gulf countries to continue functioning as they do. The conditions applied, however, are common in international migration, and often define policies enforced by governments to restrict and control migration.

Policies implemented by governments regarding international migration differ, as various factors influence the type of policy a country's government may choose to follow. The United Nations' *World Population Policies 2009* presents country profiles with the views and policies of the governments toward various population issues, including migration (United Nations 2010c). There are interesting differences between developing and developed countries when considering both views and policies. For most developing countries, such as Burkina Faso, India, and Mozambique, a major concern is internal migration due to rapid urbanization. Policies to address this form of migration are generally implemented actively. There is less emphasis on, or concern with, immigration, although many would like to see an increase in the return of citizens that have emigrated.

For developed countries, immigration is a central issue. Many countries, including Australia, Canada, and the US, view their immigration levels as too low and are trying to increase them. Other developed countries have the opposite approach, including the Netherlands, Belgium, and Denmark, which consider their immigration levels too high and are implementing policies to lower them. Interestingly, many developed countries seeking to reduce their levels of immigration are geographically small relatively to their population size, therefore experiencing higher population densities. In contrast, countries seeking to increase immigration are geographically large with lower population densities. As mentioned, countries of the Gulf are an exception to this rule: they are small and still seek to attract numerous laborer migrants. Qatari nationals represent only some 25% of the total population living in Qatar. Although these are all general tendencies, a meaningful similarity across all countries is the desire to raise or at least maintain the immigration of "highly skilled workers". The emigration of such workers from developing countries is of concern as it may have a "brain drain" effect and pose serious challenges for development (Lowell and Findlay 2001: 2). For instance, the shortage of nurses in the United Kingdom has contributed to the "brain drain" of health workers from Zambia, with negative consequences for the health sector in the latter country.

Immigration policy is strategic, steered to benefit the receiving country. In recent years, many argue that there has been a securitization of international migration policy.

As immigration may be perceived as a threat to national security, policies seeking limited and targeted migration, in addition to strict restrictions and conditions for migrants, are becoming the norm. The prominence of this is especially marked in developed countries, in the media or election campaigns; it is an issue that cannot be left unaddressed in politics. The tendency to relate security and immigration policy has increased since the 9/11 attacks and the so-called "war on terror". The tightening of immigration policy has raised significant hurdles for migrants seeking opportunities in foreign countries.

More significant today are the barriers and walls created to enforce international migration policies. Many walls were built by countries to protect themselves against invaders, the most famous being the Great Wall of China. But walls were also built to prevent illegal migration; the most infamous being the Berlin Wall, erected in 1961 by East Germany to stop movements to West Germany. During the existence of the Berlin Wall from 1961 to 1989, emigration stopped almost totally and West Berlin became an enclave between the two countries. A more contemporary and controversial case is the Mexico-US barrier. This "wall" is composed of several separation barriers and "virtual fences", with cameras and sensors designed to prevent illegal immigration across the border. As of August, 2008, the US Department of Homeland Security had built a total of 554 km of fences (pedestrian and vehicle border fences). The use of walls in international migration is revealing of the emerging security dimension in migration policies. However, this security dimension and the overall goal of restricting migration have not restrained targeted or selective immigration.

Population, Environment, and Sustainable Development

Over the past 60 years, the understanding of the relationship between population and the environment has evolved in the circles of academic and policy specialists. At the beginning of the 1950s, the attention turned to natural resources. According to the Malthusian analysis, the problem was to assess if resources would be sufficient to accommodate the rapid population growth. Then, at the turn of the 1970s, the question was modified to take into account the environment's capacity to absorb the pollution of modern technology. Finally, since the early 2000s, the analysis was broadened to consider the effects of human behavior on the global environment (notably acid rains, the global warming, and the ozone layer) (Pebley 1998: 377).

While population was recognized as an important stressor for the environment in the 1970s, in recent years population has almost disappeared as a key environmental concern. This could be due to the controversy surrounding issues of population and reproductive rights. In addition, political dynamics in the US also played a role, with government administrations and legislative bodies in the 1970s becoming significantly uninterested in environmental concerns. Finally, environmental hazards, such as climate change, were perceived as more pressing (Speidel et al. 2009b: 3049). Simultaneously, in the field of development aid, donors supporting family planning and population programs also modified their priorities, in this case toward

reproductive health and HIV/AIDS. This contributed to further sideline population concerns from a demographic as well as an environmental perspective (Speidel et al. 2009b: 3049).

The links between population and the environment are complex. There are different groups, understandings, and views on population and its significance (De Souza et al. 2003: 9). To circumvent controversy and advance certain issues in policy, governments and numerous environmental, family planning, and reproductive health organizations have avoided using the term *population* and its relation to the environment (Speidel et al. 2009b: 3059). Particularly influential opposition to advocates for the environment, reproductive health, and family planning alike has come from the religious and other social conservative groups in the US (Speidel et al. 2009b: 3049). These groups generally have reduced the implications of population growth and the related environmental challenges, opposed abortion and any policy directly or indirectly allowing it, and restricted alternatives that individuals may consider to prevent pregnancy (Speidel et al. 2009b: 3049). This domestic opposition had international reach as it influenced both the organizations working in fields related to population and the position of the US government in the formulation and financing of international population programs.

While these dynamics affect the political dimension of these policies and their relation to the environment, there are also divergent views in the policy and academic literature on the urgency of population as an environmental issue. Indeed, innovation and technological progress are often invoked to support the view that population growth does not automatically have negative consequences for the environment and that technology can be used to protect it (De Souza et al. 2003: 7).

An example of this is the use of hybrid rice technology in China. The production of hybrid rice requires less growing acreage while increasing total rice production by 44.1% since 1978. This has allowed China to save five million hectares of land and improve its food security, as well as feed 20% of the world's population (Li et al. 2009: 3). Although such innovations are promising, they are still limited and environmental and human development challenges do persist. Since the global environment is degrading, the influence of human consumption patterns on ecosystems, natural resources, and environmental sustainability is now widely acknowledged.

Indeed, population growth and human modes of consumption can threaten the environment. Agrarian communities, industrial, and post-industrial societies modify their physical environment. This raises the question of sustainable development, defined as a way of socioeconomic development that does not compromise the well-being of future generations. Although empirical research on the relation between rapid population growth and the environment is not extensive, for many analysts it is population growth itself that has been the most important or at least a major source of environmental damage (Pebley 1998: 378–379). The presence and degree of the negative outcomes of this growth on the environment, according to the US National Academy of Sciences' report of 1986, are believed to depend on economic, social, and political circumstances of a country, and the ability of institutions in place to deal with regulating the use of natural resources and changes in the environment (Pebley 1998: 379). This suggests that the human and environmental situation

in developing countries with rapid population growth is presently, and will become a lot more precarious than that of developed countries with slow population growth.[14] Human activity has "radically altered the earth's surface, oceans and atmosphere, especially over the past 200 years" (Pebley 1998: 377). In the past half century, human activity and patterns have also altered ecosystems at an unprecedented speed and degree to meet rapidly growing demands in food, water, timber, fiber, fuel, and gas (Millennium Ecosystem Assessment 2005: 1). Consequences of these developments are significant in terms of global ecology and human development.

From an ecological perspective, findings of the 2005 Millennium Ecosystem Assessment, which was sponsored by the United Nations, reveal that much of the environmental damage is both extensive and permanent. The loss of biodiversity has weakened the capabilities and adaptive capacity of life-sustaining ecosystems. Human activity has led to unsustainable use and exhaustion of natural resources (forests, cropland, water levels, and fisheries) and to increased risks of unpredictable changes (e.g., rainfall). Moreover, climate change is likely to worsen circumstances in the future (Speidel et al. 2009b: 3050; Millennium Ecosystem Assessment 2005: 1). Patterns in human consumption and how goods are produced are crucial factors. Human influence through the effects of global economic production relying on carbon-intensive technology and the over-exploitation of resources and resulting waste largely account for ecological damage. A serious concern is that environmental deterioration will escalate "disproportionately faster than growth in population size" (Speidel et al. 2009b: 3050). When considering how the gross world product grew historically as population was increasing sharply, current levels of production would have to increase six times to meet the population growth expected by 2075 (Speidel et al. 2009b: 3050).

From a human development perspective, the past 50 years have brought considerable progress in living standards, yet benefits are far from being equally distributed and environmental costs have been high. The 2005 Millennium Ecosystem Assessment stressed that addressing environmental degradations for the sake of sustainability is imperative as such changes combined with strong population growth endanger millions of people living at subsistence levels (Millennium Ecosystem Assessment 2005: 1). Poverty levels affecting the most deprived are intensifying, seriously threatening livelihoods, access to basic goods (food, water, and shelter) and services (health care, education, and sanitation), as well as prospects of achieving the MDGs. Today, countries experiencing the highest rates of population growth are the same countries experiencing severe poverty, slow socioeconomic development, and decline in areas where progress had been made (Speidel et al. 2009b: 3050).

Overpopulation and crowding are serious health threats as they may cause epidemics and the transmission of disease. Overpopulation, increased competition over

[14] As can be observed with the issue of climate change, countries with the ability to minimize or somewhat effectively address the environmental challenges, are developed countries with economic resources to invest in solutions, established institutions (e.g., authorities enforcing regulations for water and air quality), and advanced technologies (e.g., renewable energy).

dwindling natural resources, and emigration for survival are some of the scenarios appearing in regions with rapid population growth. As environmental degradation becomes an integral part of this reality, prospects for development is further impaired (Speidel et al. 2009b: 3050). The current 3.5% annual population growth rate in Niger, for instance, means that the total population is likely to double in 20 years. Niger is one of the poorest countries in the world, with a life expectancy of 48 years for both sexes combined, relatively scarce natural resources, and facing severe deforestation (Population Reference Bureau 2010a). Aggravated poverty and significant population growth generate enormous pressure on the environment, further threatening biodiversity, limited agricultural resources, and the sustainability of ecosystems. This example highlights the urgent need for socioeconomic advances to respond to population growth despite worsening environmental degradation. By the same token, the example of Niger underscores environmental degradation as a factor that will challenge development prospects. Evidently, concerns for human well-being and development coincide significantly with environmental ones.

Population trends influence the environment just as environmental changes affect population trends. From this perspective, both relationships need to be addressed in policy if the negative consequences of changing ecosystems and rapid population growth are to be mitigated. To approach this issue, preventing unintended pregnancies through family planning programs would be a consequential measure to address the strain population has on environmental sustainability (Speidel et al. 2009b: 3049 & 3062). Such a policy, which has the benefits of being potentially successful and very cost-effective, would in addition ensure the provision of a neglected service and contribute to the realization of reproductive rights goals, as outlined in Cairo and MDG 5b (universal access to reproductive health). Preventing unintended pregnancies alone will not solve the challenges of environmental sustainability, but it would slow down population growth, enhance women's empowerment (as they gain more control over their fertility), and reduce population pressures on the environment (Speidel et al. 2009b: 3062).

Still, the relationships between population, agriculture, and the environment, which have sometimes been called the "nexus" (Cleaver and Schreiber 1994), are especially problematic in countries with agriculture-based economies and few natural resources. Haiti is an example of a country that has experienced rapid population growth and high population density and that may be on the brink of an ecological disaster. It is also prone to severe hurricanes and was devastated in 2010 by its worst earthquake in 200 years.

Focus: Haiti's Ecological Disaster

Haiti gained its independence from France in 1804; the population at the time was 500,000. By 1980, the population increased by 5m people. The population increased by another 4.5m people between 1980 and 2010, i.e., in only 30 years (May and Guengant 2010).

Haiti had 9.8m inhabitants in 2010, not counting an estimated additional two million that have emigrated for economic or political reasons, mostly to the US, Canada, the Dominican Republic, and the Bahamas (but also to Guadeloupe, French Guyana, France, and Belgium).

The "boat-people" trying to reach Florida or the Bahamas on makeshift rafts illustrate the sad circumstances in which these individuals try to leave their country. Not counting future emigration, population projections show that Haiti could have a population of 15.7m in 2050, assuming an important decline in fertility. In 2025, Haiti will already have the largest population in the Caribbean and is among the most populated countries of the Western Hemisphere. Haiti occupies one-third of the Hispaniola Island, but is home to nearly half of the island population. In 2010, Haiti ranked 145th on the Human Development Index (HDI) list, among the 169 countries for which the HDI is provided (UNDP 2010b). Haiti "is the poorest country in the New World, and one of the poorest in the world outside of Africa" (Diamond 2005: 330).

During the eighteenth century, the Western third of the island of Hispaniola, known at the time as the Pearl of the Antilles, became the world's richest colony thanks to its plantation economy. The slave revolt at the end of that century dismantled this system and replaced it with a subsistence economy based on family plots. A few valuable crops (coffee, sugar cane, and sisal) padded the peasants' revenues, even if urban bourgeoisies appropriated most of the profits. Moreover, the lack of clear land titles did not encourage tenants and owners to make long-term investments in agriculture. Nevertheless, the system worked relatively well until approximately 1900. Thereafter, the excess Haitian labor force had to leave. Sugar cane cutters and workers left for Cuba and the Dominican Republic, causing tensions with local populations in those countries.

Two factors contributed to the worsening of population pressures in Haiti. The first was the steady decline in mortality. The infant mortality rate was estimated at 105 per 1,000 live births in 1990 and 57 per 1,000 live births in 2009 (see www.unicef.org). This being said, however, "[Haiti's] rates of infection with AIDS, tuberculosis, and malaria, are among the highest in the world" (Diamond 2005: 330). The second factor was the high TFR: at six children per woman until the end of the 1980s, it is currently estimated at less than four children per woman. Traditional culture and religious values helped maintain high fertility levels, particularly in rural areas.

In addition, population pressure is applied to a cramped mountainous territory of 27,700 sq. km of which only 11,000 sq. km are suitable for cultivation. Haiti has a population density of 353 people per sq. km. This poses a great challenge for an economy that is mainly based on subsistence-agriculture. The even higher population densities in the fertile plains are comparable to those of the most populated regions of Indonesia. Woodlands have shrunk to 1% of what they were at the time of Haiti's independence. "Haiti's poverty force[s] its people to remain dependent on forest-derived charcoal [for] fuel, thereby accelerating the destruction of its last remaining forests" (Diamond 2005: 341). Without the vegetation cover, the soil flows into the sea, carried away by heavy tropical rains. This in turn reduces plankton and fish reserves around the island. Most catchment-areas cannot be saved, and water supplies are becoming more unpredictable. This situation is particularly critical in the North-Western region of the island. Population pressure has brought about an ecological disaster.

Notwithstanding this sad state of affairs, most of Haiti's intellectual elites care little about the issue of demographic pressure. Efforts from isolated members of the Haitian medical community started family planning programs at the end of the 1960s (with the support of development agencies, including USAID). However, the results were far inferior to those obtained in the rest of the Caribbean (United Nations 1990b). In 2009, only 25% of couples used a modern method of contraception (Population Reference Bureau 2010a) and nearly 40% of women would like to use a family planning, but cannot do so for a variety of reasons (May and Guengant 2010). The situation is even more dismal in very poor areas (Maternowska 2006: 133–134).

One of the main stumbling blocks is a lack of commitment in favor of social change among civil servants. This in turn may be caused by a certain cultural isolation. All attempts to adopt a national population policy have failed (May 1990). If nothing is done in the area

of population and family planning, Haiti will become even poorer and more crowded. With a current population growth rate of 2.1% per year, Malthusian adjustments to population pressure, namely emigration, increase of mortality levels, and poverty, will only get worse.

However, Haiti still has several assets, among others its skilled elite (even though many professionals have left the island), and the proximity of the Northern American market. One can only hope that the country will react, and escape the impending ecological catastrophe. If not, a large part of the population will have to leave the island, or stay and survive with the help of Haitian emigrants and proceeds from international aid. Many foreign-funded organizations, such as the Haitian Environmental Foundation, are making efforts to promote reforestation and alternative fuel sources for cooking stoves (Williams 2003). More efforts of this nature, coupled with a more proactive population policy, could help Haiti recover. Perhaps the major reconstruction effort after the terrible earthquake of January 12, 2010 will help Haiti reclaim its future.

Several recent studies have highlighted linkages between population growth and climate change (Jiang and Hardee 2010; O'Neill et al. 2010). Too often, poor women and men in developing countries are trapped in economic survival practices that are hardly environment-friendly. Therefore, population pressure is exacerbating the effects of climate change, although it is difficult to attribute environmental degradation mainly to the population factor when consumption patterns have such an important impact too. Nonetheless, slowing down the rate of population growth and giving women access to reproductive health services, including contraception, will contribute to building resilience and promote adaptation to climate change.

The link between women's reproductive health and the environment is an emerging theme in the literature (Engleman 2008). In its *2009 State of World Population* report devoted to women, population, and climate, UNFPA includes population and gender considerations within the broader debate on climate change. As the former UNFPA Executive Director Thoraya Ahmed Obaid stated: "… also important are fundamental questions about how climate change will affect women, men, boys and girls around the world, and indeed within nations, and how individual behavior can undermine or contribute to the global effort to address climate change" (UNFPA 2009c: iv). Moreover, international scientists and policymakers have seized the 15th Conference of Parties to the United Nations Framework Convention on Climate Change, held in Copenhagen in December 2009 as an opportunity to reposition population issues within the global debate on the conservation of the environment.

The Global Response to HIV/AIDS

When the HIV/AIDS epidemic was recognized as a global issue, organizations of the United Nations were among the first to set up a global response to the new threat. In 1986, the WHO created a Global Program on AIDS (GPA), which was led by Jonathan Mann (1947–1998). Under his leadership, the GPA became the largest single program in the history of the WHO. However, the UN had difficulties to agree on a single common outlook on the epidemic. Some saw HIV/AIDS as a public health issue, but others saw it through the lenses of development. To resolve this

issue, the UN Economic and Social Council (ECOSOC) created in 1994 the United Nations Joint Programme on HIV/AIDS (UNAIDS), which was launched in 1996.

At the time, UNAIDS was an innovative joint venture of the United Nations family. The idea was to bring together the resources of ten organizations of the UN in the global response to HIV/AIDS.[15] As envisioned by its founders, the global mission of UNAIDS was to lead, strengthen, and support an expanded response to the epidemic in order to: prevent the spread of HIV, provide care and support for those infected (people living with HIV) and also affected by the disease, reduce the vulnerability of individuals and communities to HIV/AIDS, and alleviate the socioeconomic and human impact of the epidemic. In 1997, 1 year after it was created, UNAIDS launched the World AIDS Campaign of year-round communications, prevention, and education. This was done in addition to the World AIDS Day, an advocacy event established by the WHO and held annually since 1988 on December 1st (a different theme is chosen every year). The UNAIDS Secretariat is headquartered in Geneva, Switzerland, and works in more than 80 countries worldwide. It has been effective in raising public awareness, mobilizing funds, and strengthening country planning. However, UNAIDS has been less successful in stimulating effective, large-scale grass-roots responses to the epidemic.

Despite this major effort toward coordination at international level, the two different approaches to the fight against HIV/AIDS were never truly reconciled. The public health approach is well represented by the work of Over and Ainsworth at the World Bank that was first issued in 1997 (Over and Ainsworth 1999). They stressed the *concept of risk* (i.e., the probability to acquire HIV once exposed) and claimed that efforts should be geared at "core" transmitters groups. In their view, in order to protect the majority of the population, interventions should be targeted at hotspots of transmission, such as prostitutes or commercial sex workers, intravenous drugs users, truck drivers, and prisoners.

At the same time, a development approach stressed instead the *concept of vulnerability* (i.e., the probability to find oneself in a situation of risk). According to this paradigm, action is required to deal with the factors of vulnerability, such as gender and income inequalities, harmful cultural practices, and stigmatization. Therefore, actions on these dimensions require involvement of various sectors. Moreover, as the factors of vulnerability vary from one place to another, the response to HIV/AIDS should be local and implemented at community level.

These debates were not just theoretical. Rather, they had far-reaching implications for the design and funding of HIV/AIDS programs. For example, the World Bank launched in 1999 the Multi-Country HIV/AIDS Program for Africa (MAP), the first major global response to HIV/AIDS in sub-Saharan Africa. The manifest of

[15] International Labour Organization (ILO), United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA), United Nations High Commissioner for Refugees (UNHCR), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), United Nations Office for Drugs and Crime (UNODC), World Bank, World Food Programme (WFP), and World Health Organization (WHO).

this approach was the strategic document *Intensifying Action against HIV/AIDS in Africa: Responding to a Development Crisis* (World Bank 2000a).

This approach promoted a multi-sectoral response to address HIV/AIDS as a development issue and to engage both local communities and the private sector. The development objective of the MAP was to dramatically increase access to HIV/AIDS prevention, care, and treatment programs, with an emphasis on vulnerable groups such as youth, women of childbearing age, sex workers, and men who have sex with men. A key feature of the MAP was direct support to community organizations, NGOs, and the private sector for local HIV/AIDS initiatives. To implement this response, the MAP supported the establishment of the "three ones", namely a national strategy, a unique governance structure (of the fight against HIV/AIDS), and a single system for monitoring and evaluation. By mid-2009, the Bank had provided USD1.8bn for HIV/AIDS programs in 35 countries. The MAP was envisaged as a 15 year commitment by the World Bank.

Overall, the efforts of the World Bank were a catalyst for what would be an unprecedented HIV/AIDS-related financing for sub-Saharan Africa. Funding dramatically increased from USD1.6bn in 2001 to USD13bn in 2008. The Bank also identified new areas in the fight against HIV/AIDS, such as legal aspects (Van Puymbroeck et al. 2007).

Concomitantly, new players joined the global response to HIV/AIDS. First, a Global Fund to Fight AIDS, Tuberculosis (TB), and Malaria (GF/ATM) was formally established in 2002. The Global Fund is a unique global public/private partnership dedicated to attracting and disbursing additional resources to prevent and treat three major diseases. This partnership between governments, civil society, the private sector, and affected communities represents a new approach to international health financing. The Global Fund works with other bilateral and multilateral organizations to supplement existing efforts dealing with the three diseases. Since its creation, the Global Fund has become the main source of finance for programs to fight AIDS, tuberculosis, and malaria, with approved funding of USD18.4bn for more than 572 programs in 140 countries. The Global Fund alone provides a quarter of all international financing for AIDS globally, two-thirds of funds for tuberculosis, and three-quarters of those for malaria. The Global Fund financing is enabling countries to strengthen health systems, for instance by making improvements to infrastructure and providing training to those who deliver services. The Global Fund is also committed to working in partnership to scale up the fight against the diseases and to realize its vision – a world free of the burden of AIDS, TB, and malaria. The Fund asserts that as of mid-2007, 1.9m lives have been saved thanks to efforts in 136 countries supported through its funding.

Next, the US President's Emergency Plan for AIDS Relief (PEPFAR) was established in 2003. PEPFAR has been called the largest health initiative ever launched by one country to address a single disease. The *United States Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003* (or the Global AIDS Act) established the State Department Office of the Global AIDS Coordinator to oversee all international AIDS funding and programming. US President George W. Bush asked US Congress for USD15bn over 5 years (2003–2008) to fight the pandemic. In 2008,

PEPFAR was renewed, revised, and expanded under the *Tom Lantos and Henry J. Hyde United States Global Leadership against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act* of 2008. The expansion more than triples the initiative's funds, to USD48bn through 2013.

Initially, the PEPFAR program aimed to provide antiretroviral therapy (ART) to two million HIV-infected people in resource-limited settings, to prevent seven million new infections and to support care for ten million people by 2010 (the "2-7-10" goals). One-tenth of the money was to be spent on children whose parents were victims of AIDS. The prevention method adopted and promoted by PEPFAR was the ABC method of AIDS prevention at low cost: A is for Abstain, or starting sex life later in life, B stands for Be Faithful or stick to one partner, and C means Condoms or use condoms, if A and B do not work.

The response to PEPFAR has been largely positive. The massive funding has made ART widely available, saving millions of lives. As such, PEPFAR increased the number of Africans receiving ART from 50,000 at the start of the initiative in 2004 to at least 1.2m in early 2008. However, critics contend that spending a portion of funding on abstinence-until-marriage programs was not very effective (as a matter of principle, US social conservatives have insisted on the A and B to the detriment of the C). Other critics claim there is a problem with the Be Faithful part. In some countries men or women have a few partners, and they are loyal to their partners, but being in a "multi-loyalty" relationship creates a network for the spreading of HIV/AIDS. Finally, others feel that foreign aid is generally inefficient. Nevertheless, estimates show that in 2009 the program had reduced the death rate due to HIV/AIDS by 10% in the countries involved.

In 2010, it remains unclear whether the MDG 6 (Target 6a) of reversing the AIDS epidemic by 2015 will be met. Some encouraging developments have sparked significant victories in the battle against HIV/AIDS. In an increasing number of severely affected countries, the number of young people infected with HIV is decreasing. With the expansion of antiretroviral therapy services, the number of people who die from AIDS has started to decline as well. As can be expected, the number of people living with HIV has risen, largely because newly infected people survive longer. The vast majority of those living with HIV are in sub-Saharan Africa. However, as new cohorts of people will need treatment, funding requirements will remain huge for years to come. Since HIV/AIDS programs compete for resources against other priorities, their efficiency will also need to improve. As treatment might turn HIV/AIDS into a chronic condition, one needs to adopt a long-term perspective. The main danger at this stage is to become complacent.

Conclusion

The contraceptive revolution spread around the world during the golden years of the family planning programs, i.e., the 20 years that followed the 1974 Bucharest Conference. However, contraceptive use did not increase rapidly in the 49 LDCs

(Bangladesh is a noteworthy exception). At the same time, endeavors to implement family planning programs were progressively expanded with reproductive rights considerations. In addition, governments designed interventions to address other components of demographic growth in addition to mortality and fertility. Developing countries, mostly in sub-Saharan Africa, enacted more comprehensive population policies to address the wide range of socioeconomic issues that affect population outcomes. These policies paid more attention to the enactment of gender-sensitive measures and the enhancement of female education. Urbanization as well as internal and international migrations also became major concerns. For example, Indonesia experimented with a large transmigration program to relocate people from Java to outer islands. The linkage between rapid population growth and the environment had also gained more visibility on the development agenda. Last but not least, policies were adopted in the mid-1980s to combat the HIV/AIDS pandemic.

Overall, population policies in developing countries became broader as they attempted to address all components of demographic growth. Population policies were no longer confined to issues of high mortality and fertility levels. They became more complex because they also had to integrate changes decided in Cairo in favor of reproductive rights. In addition, they needed to address a host of new issues, including the status of women, the protection of the environment, the fight against poverty, and the global response to the HIV/AIDS epidemic. The next chapter will analyze the population policies that were designed and implemented in developed countries.

Chapter 7
Population Policies in Developed Countries

The golden rule is that there is no golden rule.

George Bernard Shaw (1856–1950)
Irish playwright

Developed countries have completed their demographic transition process, and many of these countries must now deal with post-transitional imbalances. They are facing three main issues: sub-replacement fertility, population aging, and immigration. The proposed remedies have taken the shape of policies addressing each of these issues specifically. First, some countries have designed and implemented policies to raise fertility. These policies have occasionally obtained modest results, but generally have failed to change fertility levels significantly. Second, countries have tried to address population aging by taking some programmed initiatives, for instance through the provision of specific care for the elderly. However, interventions in this area have been less well defined and, so far, not very conclusive either. Finally, several countries have attracted immigrants whilst others have tried to curb immigration flows. Immigration policies have been shaped by the specific economic and political context of receiving countries.

Issues of sub-replacement fertility, population aging, and immigration are quite difficult to address. Yet policy responses to these challenges will have important consequences for the sustainability of the socioeconomic achievements of developed countries. In developing countries, population policies are more narrowly defined (e.g., reduction of mortality or fertility) and aimed at a few key interventions (e.g., immunization or family planning programs). The situation is quite different in industrialized countries, which have more complex social systems that are difficult to adjust in order to fit new policy orientations. Policies in developed countries need to be translated into an array of social and economic regulations and programs. These regulations must be first properly identified and thereafter orderly implemented by multiple institutions and agencies. Consequently, population policy interventions in industrialized countries have been more indirect and implicit than direct and explicit.

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_7,

Sound policies call for an awareness of the issues at stake, as well as a large consensus on the different actions to be taken. Since population challenges in developed countries, especially immigration trends, ultimately concern the national identity, they have the potential to trigger political passions. Moreover, industrialized countries often harbor numerous lobbying groups and generally have vocal public opinions. In this context, the public debate on future policy orientations has been difficult and has often brought about a polarization of the public opinion, because of misleading or slanted information, or even sheer ignorance. Therefore, it should be no surprise that leaders and the public alike have at times turned a blind eye to the pressing issues at hand. Sound policies also require good data that are not always readily available, especially in the area of international migration. Finally, implementation of policies necessitates strong political will, adequate institutional settings, good coordination among various sectors, and effective monitoring and evaluation mechanisms.

This chapter first covers the three main demographic issues that industrialized countries must address. It examines the main problems related to sub-replacement fertility and reviews examples of interventions that have been implemented in France and other countries (e.g., in Asia). The second section analyzes the issues of population aging and its foreseeable consequences, for example, on public finances and fiscal space. The next section covers immigration policies and their effects as well as the economic impact of the migratory transition (this is illustrated with the example of the United States). Then the chapter turns to the various issues pertaining to population policy design, implementation, and monitoring and evaluation. It addresses the nature of population policies vs. socioeconomic regulations, and discusses the institutional settings needed to design, implement, and monitor and evaluate population policies. The chapter also analyzes family policies, including a comparison of Italy and Sweden. It concludes with the difficulties encountered to reach a policy consensus; this is illustrated with a discussion of the views expressed by the Roman Catholic Church on modern contraception.

Sub-replacement Fertility

Sub-replacement fertility is defined by levels of fertility that are not sufficient to enable the replacement of generations, i.e., when the total fertility rate (TFR) is below 2.1 children per woman on average. The replacement level of fertility is determined by the number of children that are needed to replace women by girls that themselves will reach the mean age at childbearing. The figure of 2.1 children, although somewhat arbitrary because it is linked to the mortality conditions of the moment, will be used in this analysis.

Most countries listed as developed, i.e., the US, Canada, Europe, Japan, and Australia,[1] are characterized by TFRs that are lower and sometimes much lower than those needed to replace generations. However, three European countries,

[1] In 2010, industrialized countries taken together represented 17.9% of the world population, against 32.1% in 1950, according to the UN Population Division.

Iceland, Ireland, and Kosovo, have fertility levels above replacement. Some countries such as Australia, France, Norway, and the US have fertility levels that are close to, although slightly below, replacement level (Population Reference Bureau 2010a). The old USSR is also affected by sub-replacement fertility (except the five former republics of Central Asia) and experiences a broader health crisis marked by high adult mortality levels (Feshbach 2003). In Russia, fertility levels receive national political attention and Russian presidents have mentioned demographic issues in their annual State of the Nation Address to the Federal Assembly (State Duma).

Among developed countries, the demographic contrast between the US and Canada is significant. While the similarities are obvious, i.e., young, diverse, and fast growing populations with large numbers of immigrants (although the percentage of the foreign-born population in Canada is larger than in the US), these countries have been diverging since the 1980s with respect to their fertility and mortality patterns (Torrey 2008: 87). The US has a level of fertility that is close to replacement (TFR of 2.0); Canada lags behind with a TFR of 1.7 (generous birth allowances in the province of Québec had helped increase Canadian fertility levels from previous years). The relatively high fertility level in the US may be partially explained by higher fertility rates among the Hispanic population (TFR of 3.0), while fertility levels of the population's main groups (Caucasians, Blacks, etc.) are not too far from replacement level. The US Family and Medical Leave Act of 1993 increased the proportion of mothers returning to work, and likely their willingness to have a child. Moreover, the US experiences higher proportions of unwanted pregnancies (this could also be an indication that contraceptives are less readily available).

Nevertheless, no variable seems to be able to explain fully the US-Canada fertility differential, except perhaps the role of family and religious values. These attitudes, along with a more optimistic outlook when the economy is doing well, could possibly help sustain fertility levels in the US and explain the "American exceptionalism" (Eberstadt 2007; Torrey and Eberstadt 2005). The US diverges in the area of mortality as well, experiencing higher infant mortality and lower expectancy of life than Canada (Population Reference Bureau 2010a; Torrey and Haub 2004: 519).

An increasing number of countries traditionally listed as developing also experience low and sometimes very low, levels of fertility. Since some of these countries, such as China, have very large populations, the proportion of the world population affected by sub-replacement fertility has become fairly large. In 2010, 77 countries representing 46% of the world population had sub-replacement fertility levels (Population Reference Bureau 2010a).[2] Moreover, some countries and

[2] These countries are located in Eastern Africa (Mauritius), Northern America (United States and Canada), Central America (Costa Rica), Caribbean (Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Guadeloupe, Martinique, Puerto Rico, Saint Lucia, St. Kitts-Nevis, and Trinidad and Tobago), South America (Brazil, Chile, and Uruguay), Western Asia (Armenia, Bahrain, Cyprus, Georgia, Qatar, and United Arab Emirates), South Central Asia (Iran), Southeast Asia (Brunei, Singapore, and Thailand), East Asia (China, Japan, North Korea, South Korea, and Taiwan), Europe (all countries except Iceland, Ireland, and Kosovo), and Oceania (Australia and Palau).

territories, such as Hong Kong, Macao, and Taiwan, have very low levels of fertility with TFRs of about one child per woman (Population Reference Bureau 2010a). Fertility levels are often very low in urban areas, for example in the port-city of Busan, the second largest urban area of South Korea. National averages of fertility do not take into account pockets of sub-replacement fertility now present in cities (e.g., Addis Ababa in Ethiopia) or states (e.g., Kerala in India) within developing countries, that still have aggregate levels of fertility well above replacement. Finally, it must be stressed that fertility situations greatly vary among different countries. Sometimes, fertility differentials are more readily explained by national political economies and the presence of population policies than by mere economic factors.

The case of Europe, in particular Eastern Europe and Russia where fertility has reached very low levels, is particularly challenging. In 2010, Eastern Europe was the only region in the world where the number of deaths was greater than the number of births. Therefore, it was also the only world region to experience a negative natural population growth. Eastern Europe's TFR was 1.5 children per woman in 2010 (only 71% of replacement level).

Europe as a whole has a TFR of 1.6 children per woman (Japan's TFR is 1.4). However, as indicated in the Eurobarometer Special Surveys, the large majority of European couples (almost two-thirds) want to have at least two children. This ideal is the first choice of all people questioned during demographic surveys in all countries, the second choice being three children. Evidently, fertility desires of European couples are only partially fulfilled today (May 2005: 843).

With respect to their fertility levels, developed countries fall into two categories: countries that have TFRs of around 1.8 children per woman and those with TFRs in the vicinity of 1.4 or below (Demeny 2003a: 759). In the first category, higher levels of fertility (albeit still below replacement) will mitigate or at least postpone the consequences of the population aging process. Fertility levels close to replacement may maintain the structure and numbers of a population for a long time. However, the situation will vary according to the age structure (population pyramid), which in some countries reflects past fertility levels and/or the fluctuations linked to baby-booms. Countries in the second category will face more severe consequences of population aging and, given the constraints of their age structures,[3] might experience an inversion of their population pyramids and even negative population momentum, whereby the process of depopulation cannot be stopped even if levels of fertility should increase (Chesnais 1995: 235–273).

Although the vicious-circle effect of sub-replacement fertility seems considerable, it is not sufficiently documented due to the lack of empirical data. Over the long term, there could be a widening gap between countries with a fertility level close to replacement level and those with much lower fertility levels. The presence around Europe of countries with higher fertility levels (e.g., the

[3] Because of prolonged low levels of fertility in the past, the potential future parents are just not there.

Maghreb and Turkey) could also create migration pressures from these regions (Demeny 2003b: 13), since the latter countries still have relatively higher rates of annual population growth (above 1.2% per year, and around 2% per year in Algeria, Egypt, and Libya).

Most contemporary observers are puzzled by the causes and particularly the persistence of sub-replacement fertility, especially in Europe and Japan. More than half a century ago, Adolphe Landry (1874–1956) had already envisioned the possibility of this scenario in his famous essay *La Révolution démographique* (1934). He had foreseen the phenomenon of persistent low fertility spreading to large swathes of the world (Landry 1982: 72).

Several factors can probably explain these low and very low levels of fertility. First, societal values, economic patterns, and life cycles of industrialized countries have changed fundamentally and reshaped traditional gender roles. These trends have probably been exacerbated by consumerist and hedonistic attitudes. In developed countries, women pursue longer studies and are employed (in many cases, they are more educated than their male partners). The uncertainty concerning the future (e.g., unemployment) and the lack of comprehensive child care in some countries (e.g., Germany) may lead women in developed countries to postpone pregnancies. Second, family structures have undergone important changes, including challenges to the traditional authority of the "father figure". Since women are now empowered to take reproductive decisions, they can have their first child later. Moreover, they probably make the final decision about the total number of children they want. Third, proximate determinants of fertility have also been affected. Since many women have postponed their first birth for so many years, some may have become sterile before having the opportunity to conceive. Women may also incur greater risks of sterility due to the high incidence of sexually transmitted infections.

If births are continuously delayed, some end up not occurring at all. The endless postponement of a pregnancy is stunningly captured in *Headbirths*, a German novel published in 1980 by Nobel Prize-winning author Günter Grass, where a couple contemplates having a child but eventually never conceives (Grass 1982). Contemporary angst and existential fears explain births delays to some extent, and so does the calendar of fertility (fertility tempo). The mean age at childbearing has increased in developed countries because women enter the labor force later. Assertions that couples will eventually have enough children to renew the generations, but will have them later during their reproductive life, are not fully satisfactory. However, small increases in fertility observed in recent years in some industrialized countries might be related to late childbearing (the tempo effect). Women in younger cohorts no longer postpone their births, therefore fulfilling their desired fertility goals. Concurrently, older women are eventually having their delayed births.

The challenge for public policies is to design measures and programs that could hopefully help increase fertility levels. However, specialists are divided as to the

possibility for public policies to achieve this goal. As mentioned, developed countries have different fertility levels and related policies. Some industrialized countries have benefited from fertility policies, as in the case of France. Others countries have higher fertility levels without apparent public policies to that effect, such as the US.

Regarding the examples of somewhat successful fertility policies, the case of France is of particular interest because of its long history of interventions in this area (McIntosh 1983: 43–57 & 104–126), as well as the recent increase in the birth rate. The first paid maternity leave was introduced in France in 1913 (Chawla et al. 2007: 9). Thereafter, France adopted a new *Code de la famille* (Family Code) in 1939. Today, French pronatalist regulations are among the most generous in Europe. They include *inter alia* a maternity leave, benefits for children, family allowances, a single parent allowance, an adoption allowance, and larger housing for families with three or more children. Couples also receive sizeable maternity and paternity leaves. All women workers are entitled 16 weeks of paid and job-protected leave for the first and second child (6 weeks before and 10 weeks after birth); the length of leave is increased to 26 weeks for the third child. After the maternity leave expires, parents can take additional time off until the child reaches age three and they are also entitled to reintegration into the workplace. The country has an extensive network of public child-care facilities (one of the largest in Europe), providing full day care as soon as a child reaches age two or three. Between 1995 and 1998, France spent 2.3% of its gross domestic product on family benefits (Chawla et al. 2007: 9–10). Nonetheless, France's cohort fertility has declined gradually, although it has increased slightly in recent years (TFR of 2.0 in 2010). All the generous pronatalist measures do not seem to bring fertility back to replacement level, although France is doing better than most European countries.

Other developing countries, which are nevertheless very advanced economically (particularly in East Asia[4]), have reverted to pronatalist policies after successful anti-natalist programs. Initial efforts to promote family planning (fertility declines have been spectacular), combined with human capital investments in education and health, have helped accelerate the transformation of these countries into new industrialized economies. It has been estimated that two-fifths of the economic growth could be attributable to the fertility decline and subsequent more favorable age structure and dependency ratios, a phenomenon called the demographic dividend, although the educational transformation also played a major role (see Chap. 3, *Focus: The Asian Demographic Dividends*; see also Birdsall et al. 2001; World Bank 2007a). Nowadays, however, fertility in these countries has dropped to sub-replacement levels and sometimes very low levels, as in the case of South Korea (TFR of 1.2 in 2010) and Taiwan (only one child per woman). In the 1980s and 1990s, public authorities in Asia have tried to correct some of the excessive

[4] South Korea joined the Organisation for Economic Co-Operation and Development (OECD) in 1996.

results of the initial anti-natalist policies. Nevertheless, these new pronatalist policies have not yet shown conclusive results.

Focus: From Anti-natalism to Pronatalism in Asia

Japan was the first Asian country to experience a sharp fertility decline. Japanese fertility reached the replacement level of 2.1 children per woman in the 1960s. Singapore, South Korea, Hong Kong, Macao, and Taiwan reached similar levels of fertility in the 1980s. China, Thailand, and Indonesia caught up later. North Korea reached fertility replacement level soon after 2000 (Barbieri 2006: 129) and Sri Lanka has a TFR of 2.4 (Population Reference Bureau 2010a). Rapid fertility declines, completed in a matter of a few decades, were triggered by early industrialization in some countries and profound economic and social changes in all. In addition, strong anti-natalist public policies were also implemented and helped accelerate the downward movement of fertility.

In some countries, however, for example in Japan, South Korea, and Singapore, fertility reached levels far below replacement threshold. Consequently, some Asian countries have attempted to increase fertility levels through a shift to pronatalist policies (Barbieri 2006: 129–136). Efforts are being made to bring fertility levels back up to replacement level, although it seems that new pronatalist policies are not effective enough.

Singapore and South Korea could be viewed as pioneers in Asia in the development of policies to address low fertility levels. The approach taken by each country, however, is quite different. Singapore has resolutely reverted back to pronatalist polices, whereas South Korea has directed its efforts to the socioeconomic consequences of fertility decline (Barbieri 2006: 129).

Singapore

With 7,526 people per sq. km in 2010, the garden-city Singapore is one of the most densely populated territories in the world (surpassed only by Monaco and Macao). The population of 5.1m is comprised of three ethnic groups: Chinese (three-quarters of the population), Malaysian, and Indian. At the end of the 1950s, the population's natural increase was 4% per year. In the late 1960s, the government launched an anti-natalist policy. It gave couples financial benefits favoring small families, organized campaigns to promote low fertility, and facilitated access to family planning services (including liberalization of abortion in 1974). It was the time of the "Stop at Two" policy, and it triggered a spectacular decline in fertility. This was accompanied by gradual improvements in living standards and considerable improvements in health (life expectancy at birth reached 73 years in 1987) (Barbieri 2006: 130).

In 1975, the fertility rate dropped for the first time below replacement level. A growing concern of the government was the impact of rapidly declining fertility levels on the population age structure. In 1978, the demand for labor exceeded the available supply (Barbieri 2006: 130). Measures were taken in 1984 to correct some excesses of the anti-natalist policy and especially to encourage fertility among educated women. In 1987, the official population policy became openly pronatalist, essentially to address the labor shortage. The liberal attitude toward abortion stayed the same; however, in 1986 counseling sessions became necessary for women who wished to have an abortion. The new political slogan became "Have three, if you can afford it" (Yap 1995). The policy included fiscal gains upon arrival of a third child, and other accompanying measures (e.g., child care, access to better lodgings). It was centered on the education and revenues of couples, tested against their previous fertility level. The policy openly favored the elite and Singapore residents (a large proportion of the population of Singapore is non-resident). The policy's objectives were both quantitative and qualitative: to increase the population by 40% and encourage fertility among Singapore Chinese couples with the highest education levels (Saw 1990). This was a political U-turn, reverting back to pronatalism. In 2010, fertility was estimated at 1.2

children per woman and the annual rate of natural increase was 0.6%. In 2010, Singaporean press articles called for more immigrants to counter the very low and declining TFR. Singapore will need to increase its efforts if it wants to return to replacement level fertility, and adapt its pronatalist measures to a growing and more educated female population.

South Korea

South Korea has a population density of 491 persons per sq. km (2010), not quite as high as Singapore's. In 1961, the country developed a fertility reduction policy to facilitate the country's economic development. In its first stages, the program focused on family planning education and promotion of modern contraceptive methods, making use of local health professionals trained in reproductive health. A massive communication campaign was launched and people were bombarded with messages about smaller families. In 1981, fiscal and social incentives were added to the program in order to encourage fewer births (Barbieri 2006: 132). The program had strong government backing. The funding allocated to it was multiplied tenfold.

The program achieved the desired results: fertility fell below replacement level in 1988 and the rate of contraceptive use went up to 80%. As in Singapore, concerns of an aging population and rapidly increasing dependency ratio of older people came to the forefront of population policy talks. The South Korean government needed to shift to a pronatalist policy. However, it acknowledged that the strictly demographic approach implemented by Singapore was not effective. In 1996, the South Korean government adopted a new policy that invested in mitigating the economic and social consequences of low fertility, rather than modifying reproductive behavior. The new program addressed the employment and development of social support policies for the elderly (Barbieri 2006: 133). Main objectives included improving quality of care and diversifying the contraceptive method mix. The goal of the program was no longer to increase the contraceptive prevalence rate, but to reduce the number of abortions and improve the coverage for economically disadvantaged women and adolescents (Barbieri 2006: 133–134). However, as in Singapore, the focus of the program was the elite. The pressure on the labor force has not been as bad as it was in Singapore, although this may change over the next decade. One may also see a return to policies aimed at changing peoples' reproductive behavior (Fifield 2006).

Another issue that requires serious consideration is how low fertility rates in these countries have lead to a phenomenon faced by other developed countries, i.e., population aging. In contrast to Europe and Northern America, extramarital births account for only a small portion of fertility since extramarital births are not culturally acceptable. In 2006, only 1.5% of births in South Korea were outside of wedlock. The decline in fertility in Asia may therefore be the result of a decline in marriage (delayed age at marriage) and in marital fertility. In South Korea, the mean age of women at first marriage increased from about 25 years to about 28 years over the period 1990–2005 (Suzuki 2009: 48–49), and only approximately 40% of women aged 25–29 were married (2005). These developments in marriage trends are accompanied by increases in college enrollment. Moreover, 60% of the women in the age group 25–29 were employed in 2005, exemplifying the changing role of women in society (Suzuki 2009: 52). This data could in part explain why the new pronatalist policies are not being as effective as the governments would hope. This also suggests that future attention will probably need to focus on immigration policies (Suzuki 2009: 56).

The challenge of public policies aimed at increasing fertility is to counteract the factors that have triggered the fertility decline in the first place. The reasons for a woman or a couple to have a child, or not to have one, are complex and manifold. They include, but are not limited to, the marital status (including divorce and cohabitation), the cost of bringing up children, opportunity costs for women (e.g., to pursue higher education and/or obtain employment), the household economic status, and the availability of child care and its compatibility with women's participation in the workforce (Chawla et al. 2007: 9).

Policymakers have proposed an array of different measures in order to factor in these various dimensions. These measures are volatile: they may be enacted and then discontinued soon afterward, because they are too expensive. Since 2007, Russians are given the equivalent of USD9,000 for a second child or a child of higher parity. The same year, Spain introduced a payment of EUR2,500 for any birth (a measure that foreigners have taken disproportionately advantage of). Some benefits that were offered in Europe, or that are being considered, are listed here (countries are ranked alphabetically; see Chawla et al. 2007: 9; McDonald 2002):

- 14 weeks of leave for mothers, with parental leave up to 36 months; limited child-care centers (Germany);
- 26 and 14 weeks of leave for mothers and fathers, respectively (Ireland);
- A one-off payment of EUR1,000 for the second child (Italy);
- 12 months off work with 80% pay (or 10 months with 100%) for mothers; fathers *must* take 4 months of leave (Norway);
- EUR258 payment to mothers under consideration for each new birth (and double for poor women); housing scheme being considered as well (Poland);
- Free maternity hospitals and free vitamins and iron supplements for pregnant women (Russia);
- 18 months of paid maternity leave, plus subsidized day care and flexible and reduced working hours (Sweden); and
- 6 months of paid leave for mothers and optional 6 months unpaid leave after that; free early education centers (United Kingdom).

Nevertheless, many demographers do not expect much impact on population trends from such policy changes. Even countries that have taken drastic steps to increase fertility obtained only short-lived results. Spain proposed generous payments for new births, but has to discontinue them later because they were not financially sustainable for the state. Romania became a test case when it repressed abortion to increase birth rates, but most of the success dissipated rapidly (Kligman 1998). The policy led also to increased maternal mortality rates caused to a large extent by illegal abortions.[5]

At best, public policies might slow down demographic trends at the margin (Grant et al. 2004). Overall, the consensus among policy specialists is that the effects of transfer-based pronatalist policies are negligible. Traditional monetary transfers and tax breaks appear to be too low to cover the full costs of having and especially raising children to adulthood. To achieve success, sub-replacement fertility countries should adopt a more comprehensive menu with a mix of costly and hard to implement family and social policies. Current pronatalist measures, which are very costly, are too often seen by parents and potential parents as only temporary benefits. Since these stakeholders capture these

[5] The 2007 award-winning movie *4 Months, 3 Weeks and 2 Days* provides a harrowing account of the horror of black market abortions in Romania before the fall of Communism in 1989.

benefits as soon as they are offered and for as long as they last, increases in fertility are usually temporary. For policies aimed at raising fertility to be effective on a long-term and sustainable basis, policymakers should consider combining solid financial options with work arrangements and family incentives (Chawla et al. 2007: 10; McDonald 2002).

However, there is also increasing evidence that some policies can have substantial impact, at least in the right context. Paid family leave, particularly when both parents are encouraged to share it, is sustaining fertility in the Scandinavian countries along with an excellent, means-tested mechanism of child care. These countries appear to have attained the child development community's ideal of family care in the first years of life and social and academic enrichment for preschoolers. Therefore, policies to reconcile work and childbearing within the broader context of societal values are very important.

The issue of sub-replacement fertility is here to stay. The United Nations projections assume that in 2050 Africa will be the only region in the world to have levels of fertility above replacement level, implying that 78% of the world's population will experience below replacement fertility. This, in turn, will accelerate population aging in both developed and developing countries (Lutz et al. 2008b).

Population Aging

As most countries are going through their demographic transition, mortality rates have decreased and life expectancies increased. This has been usually followed by declining fertility rates (United Nations 2009c: 4). Consequently, the growing proportion of individuals aged 65 and older in relation to the total population has become a new and irreversible demographic feature, which poses many challenges.

Measuring population aging by simply looking at the proportion of old people (however defined), is not fully satisfactory because the notion of aging is relative. Today, 65 year-old persons are young compared to their counterparts only 50 years ago. Medical progress and life-style improvements have pushed back the frontier of old age, whose definition remains somewhat subjective. Life expectancy has also increased significantly, and this needs to be factored in as well. To capture all dimensions of old age, one should include an estimate of health and quality of life among old people (the concept of life expectancy without disability[6]). Another way to measure old age would be to include as one of its criteria the age at which a person becomes dependent on someone else. More research is needed in this area to better define when old age really begins. A new definition of old age should combine physical, moral, and social dimensions, and not only endogenous demographic criteria (Bourdelais 1993).

[6] See footnotes 15 in Chap. 2 and 10 in Chap. 9.

The consequence of the demographic transition is that more people live longer and, therefore, older people become a growing proportion of the total population. In the past century, the process of population aging accelerated as developed countries saw their life expectancies increase rapidly and their fertility rates often reach sub-replacement levels. The decline of fertility in particular and the longer expectancy of life at birth (i.e., increased longevity), are the main engines of the aging process (Bloom et al. 2009: 5). It has been estimated for Europe that, in a low fertility scenario, improvements in mortality conditions should account for only a third of population aging (Calot and Sardon 1999). Therefore, fertility decline is the key driver of population aging because lower fertility rates alter the population's age structure and reduce the number of youth relatively to older cohorts (United Nations 2009c: 4). As population aging advances, the population pyramid may also become inverted (Chesnais 1995: 235–273).

Between 2000 and 2050, specialists expect that the world population aged 60 and older will have more than doubled in proportion, and more than tripled in absolute number (United Nations 2009c: ix, 11). During the first half of the twenty-first century, the median age of the world population should increase from 26.6 to 38.4 years (Medium variant of the 2008 UN population projections; United Nations 2008b). Population aging will become even more visible with the growing ranks of the "old old" (75–84), "older old" (i.e., 85+), centenarians (100+), and super-centenarians (110+). Economic and social implications of population aging are further illustrated by changes in dependency ratios. With population aging, the ratio of active persons (15–59) to people 60 years and older becomes less favorable. For developed countries, this ratio [the number of people 15–59 divided by the number of people 60+] was 5.2 in 1950. It was 2.8 in 2010, and it is expected to decrease to 1.6 in 2050 (Medium variant of the 2008 UN population projections; United Nations 2008b).

In Japan, for instance, people younger than 15 and those older than 65 years in 2010 represent 13% and 23% of the total population, respectively [in contrast, in sub-Saharan Africa, these proportions are 43% and 3%, respectively]. Japanese life expectancy at birth increased by more than 20 years since 1950 and is currently estimated at 83 years for both sexes combined (86 years for females). In 2010, the total fertility rate was 1.4 children per woman, which is far below the replacement level of 2.1 (Population Reference Bureau 2010a). In Japan, the ratio of active persons to older people was 1.8 in 2010. Another example is the United States, where currently 40m people are aged 65 and older. However, this number is expected to more than double, to reach 89m by 2050 (Jacobsen et al. 2011: 2).

There are important variations in the extent and dynamics of population aging within and between countries and regions of the world (Bloom et al. 2009: 3). Developed countries have experienced a gradual aging of their populations over a longer period of time, and have been able to adapt progressively to this change. Currently, population aging in these countries is proportionally at its highest, with 21.8% of people aged 60 and older (United Nations 2008b). Many developing countries have experienced sharp reductions in fertility since the 1960s, making aging a more recent but also more rapid trend. In these countries, population aging became a visible development since the 1970s and is currently intensifying. For example,

aging is increasing in India and China, where by 2050 the group of people aged 60 and older is expected to reach 20% and 30% of the total population, respectively (Bloom et al. 2009: 4). The LDCs still have high fertility levels for the most part, with an average total fertility rate estimated at 4.5 children per woman in 2010. Their proportion of individuals aged 65 and older is 3%, which is still very low (Population Reference Bureau 2010a). The "global divide" between population aging in developed countries and the predominantly younger populations in developing countries remains the dominant demographic divide overall (Haub 2008).

Although population aging is especially marked in developed countries, it is an accelerating trend globally (Lutz et al. 2008b). The growth rate of the world's total population is 1.2% per year and is lower than the growth rate of the population aged 60+, which is expanding at an annual rate of 2.6% (United Nations 2009c: ix). Additionally, the older population in developing countries is increasing faster than the similar segment of the population in developed regions (United Nations 2009c: 12). China has one of the fastest aging populations in the world, a consequence of its drastic fertility reduction policy (Zuehlke 2009a). Whereas population aging has happened at a slow pace in today's developed countries, aging is occurring much faster in developing countries due to their shorter demographic transitions (Chesnais 1990: 334).

By 2050, only 22% of the global population aged 65+ will be in developed countries, and 1.2bn of the projected 1.5bn people aged 65+ worldwide will live in a developing country, assuming those countries' groupings would still be valid in 2050 (Kinsella and Phillips 2005: 5). According to the United Nations' projections, older individuals are expected to represent in 2050 one-fifth of the total population in developing countries (in contrast to the current 8%), which is the proportion of older adults in the developed world today (United Nations 2009c: ix). A major implication of these trends is that developing countries will need to adapt to the rapid aging of their populations in a much shorter time. Moreover, they will have less experience to do so than developed countries (United Nations 2009c: ix).

Population aging brings significant demographic transformations with political, social, and economic consequences. Using data from the United Nations, the US Census Bureau, and the Statistical Office of the European Union, the US National Institute on Aging (NIA) has identified nine emerging trends that clearly show why population aging matters (National Institute on Aging 2007). These major features are as follows:

- For the first time in history, and probably for the rest of the human history, people aged 65+ will outnumber under-five children globally;
- Most countries, including developing countries, show a steady increase in longevity over time, which raises the question of how much further life expectancy will increase;
- People age 85+ are now the fastest growing portion of many national populations;
- Chronic non-communicable diseases (NCDs) are now the major cause of death among older people in both developed and developing countries;

- While the world population is aging at an unprecedented rate, the total population in some countries is simultaneously declining;
- As people live longer and have fewer children, family structures are transformed, leaving older people with fewer options for care;
- Shrinking ratios of working age people to pensioners and people spending a larger portion of their lives in retirement increasingly strain existing health and pension systems;
- As social insurance expenditures escalate, an increasing number of countries are evaluating the sustainability of these systems; and
- Population aging has dramatic effects on social entitlement programs, labor supply, trade, and savings around the globe and will require new fiscal approaches.

Population aging has enormous implications not only for the aging individuals themselves, but also for policy-making, public spending,[7] and family policies (World Bank 1994a). The issue of aging receives a lot of attention in policy discussions and debates in Europe, Northern America, and other developed regions. It raises concerns about pensions,[8] care-giving, social security systems, macro-economic and fiscal imbalances, and economic performance more generally (on the case of Latin America, see Cotlear 2011). In some very low fertility countries, aging has also been linked to fears of depopulation, e.g., in Japan and Russia (Kinsella and Phillips 2005: 17). How countries and their institutions should adapt to the rapid intensification of aging while ensuring good economic performance is a dominant question for policymakers, especially as the vote of the elderly is disproportionately represented in elections.

Population aging involves economic notions of working population and retirement systems. Old people are defined as those who do not contribute anymore to the creation of wealth but, on the contrary, depend financially on the younger, active people. As inactive people become more numerous, retirement schemes are under pressure to maintain the level of pensions. Three specific solutions are available to solve the issue of old age entitlements, namely increasing the age of retirement, lowering paid benefits, and making conditions under which a full pension may be collected more stringent (e.g., increasing the number of working years needed to become eligible). Among policy recommendations to tackle the issue of pensions, another proposed solution is to organize mixed pensions schemes, because the "pay-as-you-go" system suffers from the dwindling number of contributors and the capitalization system may yield unpredictable financial returns.

Implications of population aging are embodied in retirement decisions (e.g., age of retirement and public or private pensions), savings, and housing of older individuals. These behaviors and choices are responsive to institutional incentives

[7] Health expenditures (e.g., diagnosis and test costs) have increased dramatically in developed countries.

[8] In most developed countries, life expectancy has risen faster than planned increases of the pensionable age.

including taxes, subsidies, laws, and economic policy (Borsch-Supan and Chiappori 1991: 129). A significant consequence of population aging is an imbalance in social security systems, with numbers of older individuals entitled to benefits exceeding the number of those contributing in the workforce (Population Reference Bureau 2009b: 2). This is a concern as most countries pension schemes are organized as "pay-as-you-go" systems.

To address the implications of population aging, policymakers have tried to identify policy levers to influence and mitigate some of the effects of aging. Many studies have revealed that there are incentives which make retirement at the earliest possible age the most advantageous (Population Reference Bureau 2009b: 2). In the early 1990s, it was deemed that certain tax incentives encouraged early retirement in Germany (the average retirement age was below age 60). The income from retirement increased more rapidly than labor income, which made retirement very attractive (Borsch-Supan and Chiappori 1991: 109–111). In this regard, institutional incentives and disincentives to retire at a particular age could arguably be adjusted to encourage later retirement. Some studies point to the fact that social security taxes are significantly linked to low fertility levels among tax payers (Population Reference Bureau 2009b: 3). Other areas where incentives could be adjusted include taxing more heavily the wealth among older individuals and bequests, raising social security taxes, promoting healthier aging, and increasing incentives for family care of older members (Population Reference Bureau 2007a: 1; Borsch-Supan and Chiappori 1991: 129–130).

Occasionally, immigration is another measure advocated for industrialized countries to address low fertility levels and population aging. The first issue regarding immigration policies is the number of immigrants to be accepted or that are needed to offset fertility decline and meet the increasing demand for age-related services. The United Nations have proposed for several industrialized countries hypothetical and rather controversial computations on replacement immigration covering the period 2000–2050 (United Nations 2000). The goal was to estimate the number of immigrants necessary every year to maintain the populations of industrialized countries in terms of number (the total population does not change) and structure (either the 15–64 age group stays the same or the ratio of the 15–64 to the 65+ age groups remains constant). The results are sobering. For the European Union (EU) as a whole, 949,000 immigrants would be necessary every year to keep the EU population constant, 1.5m would be needed annually to maintain constant the 15–64 age group, and 13.5m would be needed every year to maintain a constant ratio of the 15–64 to the 65+ age groups. These results caused shock and dismay in Europe (especially in Germany and France) and highlighted both the discomfort caused by replacement immigration and the urgency to address also fertility issues.

Numerous studies suggest that population aging will diminish the capacity of production in an economy, because older individuals do not work or save to the same extent as younger, active individuals; future workforces are also expected to shrink (Bloom et al. 2009: 7). However, research indicates that the labor force is likely to become a larger share of the aging population despite the aging process, in which case the effects of aging on economic growth may not be negative. Aging

may be linked to greater involvement of women in the labor force, increased capital accumulation among young adults, and higher saving rates. Essentially, the effect of population aging on the economies will depend on how immigration, child care, and retirement policies are designed and implemented (Bloom et al. 2009: 8).

Some authors emphasize the negative weight of old people in a society, the cost of their retirement, and the burden posed by their health care. A large literature has appeared recently on the graying of Western societies[9] (e.g., Longman 2004; Magnus 2009). The reduction of fertility could cause a progressive economic recession, as the reasoning goes, because entire sectors aimed at young classes (education, leisure industry, etc.) would disappear. When these young classes reach adult age, the recession could only deepen. The presence of very old people also raises medical issues and complicates the organization of the society. Older people require more care and those aged 90 and over are rarely autonomous; they require continuous care, especially medical attendance, a constant presence, and often have to be placed in old-age institutions. Family solidarity becomes rarer because of declining fertility and reduced number of siblings, and the state's and communities' responsibilities increase.

The rapid spread of the Alzheimer's disease, and its consequences for health services, add another somber note to this picture (Gourbin and Wunsch 2001). The emergence of the debate about euthanasia in some industrialized countries (e.g., Netherlands and the US) is linked to increasing proportions of bed-ridden invalids. Population aging evokes even more subjective notions of vitality and survival of societies. In his report in 1962 on the demographic situation of the Walloon population of Belgium, Alfred Sauvy (1898–1990) considered that the region was doomed, because "a country without youth is condemned to become a country of old people brooding old ideas in old houses".[10]

Others researchers, partisans of the "gray revolution", place their hopes in socioeconomic and political measures that would enable older people to participate more fully in the economy. Relatively young people are too often forced to take early retirement (in some European countries, age for early retirement is set at 55 or even 50). The wealth of experience of older people could bring much added-value to the economy (Rochefort 2000). Even aging industrialized countries continue to dominate the international economic and scientific scene. It seems that the dynamism of modern societies is ensured by a nucleus of very experienced people who often live in dynamic cities and perpetuate their society's socioeconomic advances through technological innovation, rather than by a mass of younger but less trained and much less experienced workers.

The aging of the baby-boom generation further highlights the significance of aging in developed societies. Many countries have had to adapt to the retirement

[9] At this stage, however, population aging appears to be more threatening than population decline or depopulation.

[10] See http://www.wallonie-en-ligne.net/1996_Societe-wallonne-depuis-Liberation/dossier/E1.HTM, accessed on March 13, 2010.

of the current generation of baby-boomers. In the US, it caused changes in education systems, workplaces, and even the demand for leisure activities (Himes 2002: 3). Today, older populations are living longer, they are more active, and sometimes less dependent on relatives; this changes the very concept of population aging. Behavioral changes, improvements in health, and the significant wealth and financial resources of this segment of the population in developed countries, change their influence on socioeconomic and political issues (Sanderson and Scherbov 2008: 3). When considering the situation of older individuals, there are important issues of well-being, including healthcare, poverty, and support mechanisms, although there is great diversity within this sub-population. Numerous health conditions in older individuals are specific to their age group and require particular care, meaning that there is pressure on social security and healthcare systems to adjust to the new circumstances. For instance, aging can put a strain on individuals' mobility and ability to care for them and complicate home management tasks, for which they will often require daily assistance. Further, diseases related to aging, such as Alzheimer's disease and senile dementia, are becoming more prevalent as population aging advances (Kinsella and Phillips 2005: 20–21). In addition to immediate health conditions, the loss of social connections, as partners and friends pass away, can result in increased vulnerability and social isolation. In these situations, lack of adequate care and healthcare are common and can be accompanied by cases of verbal, financial, and even physical abuse of older individuals (Lee 2009). Globally, old age poverty and vulnerability to abuse is a growing social issue.

Some key challenges of aging are similar across countries and regions. Among these are issues of social security systems, diseases linked to old age, or characteristics of the aging population such as gender differences. Gender differences are an important characteristic of aging. Across the world, women represent the highest proportion of persons aged 60 and above, regardless of country or region. While it is not entirely clear why this trend dominates, there are implications for older women who are much more vulnerable to poverty in their older ages. Compared to men, women are more likely to have lower incomes and fewer assets and resources, a situation which is exacerbated for separated and/or divorced women (Yin 2008). For example, in the US, 36.9% of separated and/or divorced women aged 65+ are in poverty and, in Germany, this proportion is 22% (Yin 2008). In developing countries, women also face increased poverty in old age, as they primarily depend on family and social networks for support (Kinsella and Phillips 2005: 24). If this social network breaks down, older women become especially vulnerable to poverty, poor health, and isolation.

Immigration Policies

Immigration is arguably one of the most controversial and debated population policy issues in developed countries, although several of these countries have been or still are largely populated by immigrants (e.g., Australia, Canada, New Zealand, and

the US). In the context of globalization, goods and services are moving more freely. Migration, however, remains constrained, despite the need for global labor mobility (Pritchett 2006: 6).

Immigration is an issue that often sparks fears of changes that could result from the arrival of new populations. In practically all developed countries there are some groups, organizations, or political parties opposing policies favorable to immigration. Common concerns relate to adverse socioeconomic consequences for the host population, such as loss of job opportunities and decreasing living standards. From this perspective, immigrants are often seen in receiving countries as a threat to low-skilled workers, to the setting of the society, and even to a country's cultural and religious values (Martin and Zürcher 2008: 4). Historically, many immigration policies have reflected this, and still do nowadays. This entails increasing restrictions and conditions for entry as well as greater selectivity of immigrants, mostly in Western European countries, but also to some extent in Australia, Canada, New Zealand, and the US.

Nonetheless, many developed countries need immigration to shore up their declining labor forces and sustain their economies. When considering low skilled-work, it is generally acknowledged that immigrants are more likely to accept low-wage and sometimes dangerous jobs in developed countries, which natives are less willing to take. Further, immigrants provide an array of skills and/or cheap labor that positively contribute to the economies. Consequently, countries often target highly skilled and less-skilled individuals for immigration, especially in areas where domestic labor is insufficient. Immigration is sometimes encouraged to replace population deficits (depleted cohorts) in receiving countries, and to counter effects of low fertility and population aging.

Traditional immigration countries could soon have to resort to increased immigration, such as Canada, which in 2010 has a TFR of 1.7 children per woman. There are many issues with this, however, including projecting the number of immigrants needed and how to best integrate them in receiving countries. The immigration debate is significantly complicated by immigration's intimate link to national identity, and how immigration could modify it. In fact, as immigration has become more visible, negative public sentiment toward immigrants occasionally leads to hostility from, and conflicts with, host populations.

Immigration policies in developed countries have changed significantly since the 1990s. According to the United Nations, 60% of developed countries wished to reduce their international immigration levels in 1996, whereas this figure decreased to 8% in 2009, representing only four countries (United Nations 2006a: 6, 2010a: 73). In recent years, governments have adjusted policies to promote the immigration of the particular types of individuals they need and limit other forms of immigration, especially illegal migration. Generally, this has implied the immigration of more temporary migrants (including sometimes low-skilled migrants), as well as high-skilled migrants. The United Nations' specific inquiries to governments suggest that there has been a gradual shift in government immigration policies, and that governments seek to manage migration more than they attempt to restrict it (United Nations 2006a: 7, 2010a).

A large share of developed countries would like to maintain current immigration levels, despite the controversy in policy discussions. Their immigration policies remain more restrictive than in developing countries (UNDP 2009: 34). Some developed countries, such as Canada, are actively seeking to increase immigration to maintain economic performance and address particular needs. Unlike the US, European countries (with the exception of Italy) do not have immigration quotas, nor do they discuss such quotas during immigration policy debates.

When analyzing the policy intentions expressed in the United Nations' inquiries, there seems to be a gap between what appears to be controversial and what is actually being implemented. Immigration is controversial in public debates, as many groups and a large share of the public opinion are opposed to policies facilitating immigration. Still, government attitudes on immigration in developed countries tend to lean toward more selective immigration. In Europe, there have been increasing restrictions on the borders of the European Union. This is coordinated by the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union, headquartered in Warsaw, Poland, and known as the "Frontex" program. Paradoxically, however, the European Union has opened up to selected migrants due to a need for certain types of skills, a strategy explicitly expressed by the European Commission (Van Houtum and Pijpers 2007: 292).

A recent and now leading approach to immigration in developed countries has been the linkage of migration and development. The underlying idea is that migrants are a source of development in the eyes of the receiving country, but also for their country of origin (Ministry of Foreign Affairs of the Netherlands 2008: 6). According to a policy memorandum compiled by the Dutch Ministry of Foreign Affairs, remittances that migrants send home, their skills, as well as the networks they form can be good engines of development. Remittances are seen as a major contributor to socioeconomic development, especially for countries that have already reached a moderate level of development, and where education and investment options are better established. Integration and good socioeconomic status in receiving countries are believed to result in more entrepreneurial attitudes among migrants upon return to their countries of origin.

The feminization of migration is also believed to advance women's empowerment through financial independence and access to family planning (Ministry of Foreign Affairs of the Netherlands 2008: 6–8). Integrating migration and development is seen as a constructive way to enhance benefits from both, although the evidence as to how migration contributes to development and how development affects migration is not conclusive (Bakewell 2008: 1). The existing risks of "brain drain" from developing countries are also acknowledged, yet the solution advanced is further circular and temporary migration in order to transform this dynamic into a net "brain gain". Most immigrants are already skilled individuals and the number of temporary migrants who often return to their countries of origin is increasing (UNDP 2009: 33). This policy perspective emphasizes the benefits of this kind of migration, and is very much in line with current policies in Europe and other developed countries.

It is worth examining the case of the US, which has been, and still is, the ultimate destination of millions of migrants from all over the world. As such, this example brings together many different facets of the immigration debate in developed countries.

Focus: The US as the Ultimate Immigration Country

The US is truly a "nation by design" (Zolberg 2006a) created by the engine of immigration.

In 1700, there were about one million people in Northern America. In mid-2010, the population of the US was close to 310m, the third largest in the world after China and India (Population Reference Bureau 2010a). Today, the population of the US represents 4.5% of the world population instead of 0.15% in 1700. Such a 30-fold population increase is quite exceptional in the history of humankind (Chesnais 1999: 612).

According to US Law, "immigrants" are defined as persons who are entitled to live and work permanently in the US and can become naturalized citizens after 5 years of residence (Martin and Widgren 2002: 12). Over the course of history, millions of people from all corners of the globe have come to the US, perceived as a land of opportunity, in pursuit of the "American Dream". Immigration not only makes it possible for immigrants to better themselves and their situations, but it also serves national interests by bringing much needed skills and cheap labor to the US economy (Martin and Widgren 2002: 11). Nonetheless, the US has welcomed both economic and non-economic immigrants.

Immigration plays an important role in the size, distribution, and composition of the US population. Between 1900 and 1997, the country welcomed 44m immigrants (gross immigration) of which 33.7m stayed (net immigration). Since the 1990s, the country has received more than one million immigrants per year. The immigrant population accounted for one-eighth of the population's increase in the US in the 1960s, and further accounted for at least one-third of the increase between 1990 and 2000 (Martin and Midgley 2006: 16). The foreign-born population rose by eight million over the 1990s, reaching 28m in 2000.

In spite of these figures, immigration to the US has not been steady or regular, but has taken place in waves (Martin and Widgren 2002: 12). The first wave of immigrants arrived before 1820 and consisted primarily of people from the British Isles. The second wave arrived in the 1840s and 1850s from Ireland and Germany. The third wave came between 1880 and 1914, and brought more than 20m immigrants, mainly from Southern and Eastern Europe. However, World War I and US Immigration policies in the 1920s dampened the rate of immigration. The fourth wave of immigration began in 1965. Immigration policy reform eliminated the previously set quotas that favored European immigrants. This was a major and often overlooked shift in the history of US immigration, for it opened doors to immigrants from all regions of the world. The new policies gave also priority to immigrants who had family in the US and/or needed skills. With this immigration policy shift, numbers grew substantially and the majority of immigrants came from Latin America and Asia rather than Europe. The post-9/11 phase appears to have opened a new chapter in US immigration, which is currently in the making.

US immigration policies dictate how many, from where, and in what status newcomers arrive to the country (Martin and Midgley 2006: 11–13). Under US 33rd President Harry S. Truman, efforts were made to eliminate the national origins system. This was confirmed when Congress issued the Immigration Act of 1965 that modified the Immigration and Nationality Act of 1952, eliminating some of the racial and ethnic discrimination in the immigration policy at the time when ethnic and racial relations were being challenged and modified (Martin and Midgley 2006: 12). The National Origins Quota System was in principle supposed to prevent immigration from creating an

upheaval in the national ethnic composition of the US. It was abandoned in 1965 in favor of non-Europeans as well as family-links criteria. The assumption was that reuniting families would maintain the ethnic composition, although this did not materialize (Teitelbaum and Winter 1998: 140).

The large immigration inflow has triggered anti-immigration sentiments and Americans have become divided over immigration. Even if the debate is not as acrimonious as elsewhere, problems remain. These include the fear of losing the national identity or seeing Spanish replacing English as the main language (in California, along the Rio Grande, and in Florida), the rejection of immigrants (as in California and Arizona), conflicts between immigrants and certain communities (Asian and Afro-American), and the possible increase of costs to the Social Security (although it could be argued that immigrants will contribute more to Social Security than they will draw out).

Significant immigration reform and controversy continued in the years 1980–2006. Given the accelerated pace of global migration, the US Congress implemented changes. The most important revolved around the terrorist attacks of September 11, 2001, which triggered the tightening of US border control and the monitoring of foreigners' movements in the country. Anti-terrorism laws, such as the Patriot Act (2001), and the creation of the Department of Homeland Security (2003) have made it increasingly difficult to migrate to the US, particularly from Middle Eastern countries.

Immigration and related policies have definitely shaped American society. However, these policies continue to change with each new generation and fluctuate as the political will changes when the Democrat and Republican leadership alternate. It will be interesting to see what changes develop in the coming decades as the country faces the threat of terrorism, as well as many issues concerning the rights of illegal immigrants.

Today, illegal immigration, especially from the South, captures the headlines. Despite new laws and sanctions on American employers, the US-Mexican border remains a sieve. The sentiment of America is one of a country being invaded by frequent arrivals of boat-people from the Caribbean. For many, immigration trends are also security issues. Political and social forces have risen to favor indigenous population to the detriment of immigrants (this has been called "nativism"). An ongoing debate turns also around the issue of what to do with the millions of illegal immigrants currently living in the US.

Despite taking pride in being a "nation of immigrants", a growing proportion of Americans feels that immigration policies should become more restrictive, particularly in times of economic hardship, high unemployment, and pressing security threats (Zolberg 2006a: 383).

Over the past 60 years, Europe has used diverse policy levers to encourage and/or discourage immigration. Until the oil crisis in 1973, immigration levels were high, with many labor migrants entering Europe. Labor immigration was facilitated in most countries because economies were booming and larger workforces were desirable; European countries generally pursued a laissez-faire immigration policy (Zimmermann 1995: 58). In Germany, an extensive guestworker and "temporary" migrant system facilitated labor migration. In France, a policy of permanent migration included integration and assimilation, especially for immigrants from former French colonies (Zimmermann 1995: 57). Assimilation and integration efforts in Europe, which have been strongly accentuated in recent years, can be seen as policies likely to assist a quicker adjustment of immigrants, on the one hand, but are also likely to make migration unappealing for many individuals, on the other (Bruquetas-Callejo et al. n.d.: 21; Zimmermann 1995: 51). The notion of integration implies assimilation, e.g., learning the language of the host country, blending into the economy with minimal discrimination, adopting customs and

political mores of the receiving country, and eventually becoming a citizen.[11] Integration occurs through institutions such as schools, professional groups, as well as community and neighborhood associations. If immigrants are more numerous than native populations, these institutions no longer serve as efficient tools of the melting pot. If immigrants stay isolated culturally, socially, or religiously and/or do not mingle geographically with inhabitants of the host country (ghettos), the melting pot does not work either.

Interestingly, these efforts have recently been symptomatic of countries renouncing a "multicultural" identity, such as the Netherlands, where integration policies currently concentrate expectations, costs, and responsibility for assimilation on the immigrant alone (Bruquetas-Callejo et al. n.d.: 3 & 21). In Europe, there is pressure to integrate immigrants, which is much less pronounced in the US where ethnic or cultural niches can coexist without much contact or need for assimilation (Zimmermann 1995: 51). In this respect, Europe and Japan appear to face more problems in addressing the issue of immigration than long-standing receiving countries such as the US, Canada, and Australia.

After the oil crisis of 1973, there were increasing restrictions on immigration to Europe, especially to Germany and France. The number of migrants sharply decreased and actions were even taken to favor the return of immigrants to their country of origin. In France, policy levers included limitations on family unification, strict border controls, and priority given to domestic labor through strong trade unions. In Germany, acquiring citizenship was difficult for non-ethnic Germans and since immigration rights are granted on a temporary basis, settlement remains difficult (Zimmermann 1995: 57–58). Although immigration increased again in the 1990s as individuals from Eastern Europe migrated to Western Europe and the number of asylum seekers and refugees increased, policies have continued to become more selective and restrictive. Today, special status and programs for highly skilled migrants are present in many European countries, including bilateral agreements between countries to attract the types of immigrants required. However, family reunification has become more restricted: for instance in Ireland parents with children born in some EU countries cannot gain citizenship anymore, in the Netherlands minimum age and wages have also become conditions for spouses to immigrate, and in Denmark some EU nationals must prove solvency if they wish to bring their foreign spouses (United Nations 2006a: 10).

Each country has its own policy characteristics and the EU has made efforts to harmonize immigration policies. Under the Schengen Agreement signed in 1995 (which created a passport-free zone), the EU sought to harmonize migration policy

[11] In 2010, German Chancellor Angela Merkel admitted publicly that multiculturalism has failed in Germany and advocated integration instead; see http://www.csmonitor.com/Commentary/the-monitors-view/2010/1018/Merkel-on-failed-German-multiculturalism-Other-countries-should-listen-up, accessed on January 27, 2011. Germany also wants to regulate its *medersas* (Islamic schools) and has requested that their teachers should be German citizens, teach in German, and stay permanently on the job (many *medersas'* teachers usually come from Muslim countries on fixed-term contracts) (Carl Haub, January 20, 2011, personal communication).

through stricter external border control, a more integrated visa policy, and management of asylum policies (Zimmermann 1995: 59).[12] Numerous directives on immigration have been adopted at EU level. The coordination of national and supranational policies can be challenging, yet joint policies are arguably a major and strategic lever to control migration to Europe (Guiraudon 2000: 268). The strict tightening of external borders or, as some say, the emergence of "fortress Europe", is an example of this. The paradox is that the European integration and the free movement of labor among EU countries, which affects labor markets in many EU member states, has been counterbalanced by a much greater rigidity of policies toward immigrants originating from outside the EU.

Population Policies vs. Socioeconomic Regulations

In developing countries, population policies have generally been defined narrowly. Often, their main objective was quite simple, i.e., to decrease mortality or curb fertility or both. The way these population policies were implemented was also straightforward, namely through the provision of immunization or family planning services. The management of such policies was usually the responsibility of the state (i.e., government). However, policies were occasionally implemented in conjunction with private sector associations. In Latin America, for instance, family planning NGOs played a major role. In these countries, small groups of people achieved concrete results, after agreeing with political leaders and the society at large on actions to be taken.

The situation is very different in developed countries. These countries have complex socioeconomic systems, which are harder to modify to fit new political orientations. In fact, many developed countries do not have explicit population policies (e.g., the United States; see Haub 2006: 395), despite actively influencing or seeking to change some of their population dynamics. Countries in Northern America and Europe regularly discuss domestic population levels and the need to increase or decrease the size of their populations. There is an ongoing lively debate on immigration taking place in Australia, which must address the phenomenon of boat-people coming from Asia.

In both Canada and Italy, for instance, there is no population policy, albeit these countries consider their low fertility levels and population aging to be a major concern (United Nations 2010c). In Canada, this is significantly being addressed through international immigration, viewed as too low (United Nations 2010c). A relatively high number of immigrants, almost 80% arriving from developing countries, with many highly skilled and/or seasonal workers, enter Canada to compensate for low fertility, support the country's economic performance, and balance the population's age structure (UNDP 2009: 32). Italy is similar in this regard, yet

[12] After the influx of refugees from Northern Africa into Western Europe in 2011, several European countries have been reluctant to fully comply with Schengen's rules.

unlike Canada the proportion of unskilled immigrants is higher (UNDP 2009: 2). Thus, immigration is a process that can be manipulated to mold the growth and composition of a population. From this perspective, these governments are using immigration regulations that are not explicit population policies in order to shape their domestic demographic outcomes.

In developed countries, population policies have generally taken the form of an array of socioeconomic regulations. These countries use numerous socioeconomic channels to tackle population issues, and not only immigration, although it is currently the most discussed topic. These channels include education, urban and rural planning, retirement policies, family policies, and various other incentive/disincentive schemes. Governments may seek to reduce population density in urban settings and facilitate settlement in rural areas, which may lead to higher taxes in some areas, new employment opportunities in low-density regions, or cheaper housing in rural and planned urban zones. Likewise, creating incentives for later retirement can reduce pressures of an aging population. Higher costs of education and health care tend to increase the cost of having children. Therefore, governments may provide higher benefits for families with children when trying to increase fertility levels.

Responsibilities for public policies in developed countries are also the purview of a fairly large number of actors. No single administrative body is in charge of implementing population policies. Rather, a broad range of public or semi-public organizations are responsible for monitoring socioeconomic regulations, which are expected to have an effect on population trends. In this respect, one must mention organizations in charge of family welfare, social security administrations, and administrative bodies designed to manage public transfers.

The role of governments on fertility is generally confined to the design of family policies, the provision of family planning services, or the provision of incentives to raise fertility. In reality, the influence of governments on individual, family, and fertility behavior is much more extensive; whether it is intentional or incidental, it goes deeper than usually acknowledged (McNicoll 2001: 129–130). There are direct policies aimed at changing fertility, on the one hand, and an array of other public sector activities that are also likely to shape fertility, on the other. In developed countries, socioeconomic development has generated new opportunities, enhanced mobility (social and geographical), as well as increased human capital costs, including the cost of having children (McNicoll 2001: 149). This economic feature in particular has resulted in people having fewer children, in addition to social and cultural change regarding fertility behavior, norms in social groups, and changing attitudes toward fertility.

Although socioeconomic processes underlie fertility decline, fertility behaviors occur within a framework outlined by the political and administrative institutions of the state, i.e., the polity.[13] This system has a way of managing fertility through

[13] The polity is a particular form or system of government or a structure that is the institutional expression of the state; see McNicoll (2001): 135.

marriage, reproduction, and child rearing behavior. This framework is "an institutional manifestation of the state" (McNicoll 2001: 135–136). Anti-natalist efforts made by governments to adjust fertility levels involved direct birth control programs, which took off in developing countries in the 1950s and 1960s, as well as other institutional actions. One such example was the drawing of limitations on marriage, through the establishment of a minimum age (McNicoll 2001: 142). Other indirect and probably unintentional government actions include economic management, educational opportunities, tax structures, labor market policies, health-care systems, and pensions (McNicoll 2001: 156).

The distributive role that the state has in an economy is believed to affect fertility, especially when transfers are directly related to age-group and/or linked to the family situation (McNicoll 2001: 147). In recent years, population aging has become a primary demographic concern. In developed countries, whereas child rearing is very costly for parents, old-age costs are funded by pension schemes where active workers support the older population. The institutionalization of transfers in favor of old-age dependency (as opposed to child dependency) has become deep-rooted in the functioning of societies and may contribute to lower fertility. Old-age transfers are seen as entitlements, which make political reform more difficult (McNicoll 2001: 148). Institutional management of population aging has highlighted the relationship between government and fertility (as well as its complexity), especially as addressing the issue implies additional action on the part of the government. Fertility is responsive to a socioeconomic setting, and programmed interventions are just one part of it (McNicoll 2001: 155). There are processes of change that are generally more significant for fertility trends than government actions (McNicoll 2001: 135).

Several other features that are specific to developed countries make the implementation of policies and socioeconomic regulations more challenging than expected. First, sources of demographic data are often fragmented, which complicates the diagnosis and design of potential interventions. Often, organizations tasked with analyzing demographic data are not those in charge of data collection and processing. Second, different services routinely work on the same population-related issues. This may delay the decision making process and hamper the implementation of interventions. Third, some measures, e.g., those aimed at increasing fertility, often require actions to be undertaken at the same time in many different areas. Welcoming a third child, for instance, requires planning for more spacious accommodation, securing day-care for the new baby, maintaining the parental revenue, and ensuring the mother's later reentry into professional life. Such interventions to promote larger families would require urban planning, improved social equipment, additional day-care centers, family subsidies, fiscal measures, and regulations to increase labor market flexibility in favor of women. Organizations that supervise the coordination of all these measures do not have the authority and/or practical means to ensure the implementation of their recommendations, even less their effective coordination.

Finally, life cycles and family structures have also changed greatly in developed countries since World War II. In Western Europe, strong growth and full employment

characterized the "Glorious Thirty" (defined as the period from 1945 to 1975). Today, professional life starts much later because studies and professional training last longer. People who work cannot save as much for their retirement because of the greater flexibility of the professional life, more frequent jobless periods, the instability of the financial markets, and the lack of unity in some retirement systems (e.g., in the US). Workers can also expect to live longer, making retirements and health care more expensive. Marriages are also less stable. Families are often recomposed, which means that they include an adult couple, married or not, living with at least one child from a previous union of one of the two adults. Consensual unions that result from a cohabitation (people sharing same lodgings) are becoming a common social norm. These recomposed, cohabiting, or even single-parent families must support increased financial burdens with respect to both their children and dependent adults (parents and sometimes grand-parents, who experience increased life expectancy).

Family Policies

In their attempts to increase fertility levels, developed countries have also used more focused policy tools, namely family policies. These are a "subset of government social policies that have as their object the well-being or the behavior of families, particularly families with children" (McDonald 2003: 371). The effect of these policies goes beyond the realm of fertility, since family policies may also complement aging policies and immigration policies (for example, when immigrants' admittance criteria include family reunification).

Family policies have three main objectives: to help establish the family by supporting and strengthening family relationships, to support families to care for their dependent members, and to support the next generation of productive adults. Family policies take four major forms: legal, financial, industrial (labor), and the provision of services, although these dimensions may overlap (McDonald 2003: 372).

Legal dimensions of family policies encompass laws designed to promote family policy objectives. Such laws reflect social and/or religious values of the society at the time they are enacted. Marriage laws cover *inter alia* the eligibility criteria to get married, the age at first marriage, rights and responsibilities of partners, the matrimonial property and how it is to be distributed, the legal status of children, and provisions for nurturing children. Specific laws lay out procedures for adoption. Other laws regulate divorces, attribution of matrimonial property and alimony for spouses, and care for divorcees' children. Laws and regulations pertaining to the family not only govern obligations of parents toward their children, but also obligations of adult children vis-à-vis their aged parents (but enforcement of these obligations is often difficult). Finally, society's values and norms may sometimes promote individual rights to the detriment of family rights (McDonald 2003: 372).

Under the financial dimensions of family policies, governments use tax or cash transfer systems in the form of periodic cash payments, lump-sum payments or

low-interest loans, and/or tax rebates, credits, and/or deductions. Cash payments are linked to each child and made to the parents, usually monthly (Gauthier 2003: 350). Payments vary according to the age of the child but also to the birth order (parity) and, most often, the overall number of children in the family (payments are routinely higher for higher parity children and for larger families). Cash payments may occur upfront (when the child is born) or be deferred (when the child is older and presumably more expensive). Cash payments are a form of horizontal equity, i.e., recognition of additional costs of raising children. But vertical equity might be addressed also if cash payments are income-tested (this will ensure equalization of incomes across households). Income-tested payments may prove inefficient if they create work disincentives for the second money-earner in the family (McDonald 2003: 373).

Lump-sum payments or low-interest loans may take the form of baby bonuses and/or maternity benefits that are paid at the time of the birth, when the child goes to school, or even later. Establishment loans might be granted when the marriage takes place and portions of the loan may be written off with each new child. However, payments may decrease when incomes increase. Payments may also take the form of additional contributions to social security and/or pension schemes. The overall purpose of these payments is to spread the costs of the children as much as possible across the lifetime of parents. Immediate payments are deemed more successful to increase fertility than deferred benefits. Similarly, immediate housing benefits usually bring more results with respect to fertility than promises of future help with the education of children and/or more generous pension payments (McDonald 2003: 373).

Tax rebates, credits, or deductions may be granted according to the presence of a spouse and/or a child. Like periodic cash or lump-sum payments, these benefits may be linked to the order of birth, the age of the child, and the overall number of children in the family. Although rebates and credits are usually equitable, deductions may favor richer households and therefore prove socially inequitable. Children may also benefit more directly from cash payments than from assistance delivered through the tax system. Since tax benefits are less visible than cash payments, they may be more politically acceptable in periods of fiscal restraint. Tax benefits may be applied to a couple's separated or joint incomes, but may also operate as a work disincentive of the second money-earner in the household. As more women participate in the labor force, governments generally prefer individual taxation benefits (McDonald 2003: 373).

The industrial (or labor) dimension of family policies aims to offer a range of measures to enable parents (mothers and/or fathers) to juggle family responsibilities and participation in the labor force. A key idea here is to assist parents who have children to return to their jobs and/or to combine their ongoing jobs with their new parental duties. Following an addition to the family, the reentry of parents into the labor force may be construed as a right, i.e., the right to return to the job held prior to the birth. Instead, this reentry may be facilitated by more flexible working arrangements, such as distance-work schemes, part-time work schedules, or more flexible working hours. Time-off when the child is not at school and short-term leaves for family-related purposes belong to this array of measures. Maternity and/or paternity leaves may also be used. Such parental leaves may vary in duration and level of

financial compensation. Leave benefits may be covered by employers, private insurers, and/or the state (McDonald 2003: 373).

Family policies can also support the family through the delivery of specific services. In this respect, paramount measures are child care and pre-school education and health services. However, the delivery of services may comprise a wide range of other services, such as information, assistance to dependent family members and/or disabled people, as well as sporting and recreational services. Child care is a key pillar of the services delivery dimension. Child care is offered either through capital grants to child-care centers or subsidized child-care fees for the parents. Child care should be made available not only to working parents, but also to unemployed parents who then could pursue additional training opportunities and seek employment. Child care may overlap with the tax rebates, credits, or deductions measures of family policies, because the cost of child care can sometimes be deducted from tax returns. Occasionally, child care is exempted from consumption and/or other taxes and may be treated as business expenses if costs are supported by employers. Finally, "out-of-school-hours" care needs to be provided as well, either through community centers or at the child's school. In addition to the German deep-rooted cultural norm that women need to raise their children by themselves, it could also be argued that fertility in Germany is very low because women can hardly reconcile employment with "out-of-school-hours" care (McDonald 2003: 374).

Although many OECD countries have increased their support to families, family policies remain quite diverse (Thévenon 2011: 75). Broadly, developed countries may be categorized as those with an explicit and comprehensive family policy (e.g., France, Norway, and Sweden); those with an explicit but more narrowly defined family policy (e.g., Austria, Denmark, Germany, and Finland); and, finally, those with an implicit and reluctant family policy (e.g., Canada, United Kingdom, and the US) (Gauthier 1996: 6).

It should also be kept in mind that family policies come with their shortcomings and contradictions. First, should family policies be geared at families instead of individuals or communities? Policy measures at the levels of community, family, and individual may produce conflicting outcomes. Means-tested cash benefits to the family may entice one individual member of the family to forego employment, because cash transfers would be discontinued if family incomes increase. In this particular case, cash transfers could possibly decrease the self-reliance of an individual obtained through employment. However, without family policies and benefits, individuals may decide to stay single, i.e., not to marry or enter any form of union. Then, these individuals would not bear the high costs of raising children, which imply also potentially lower incomes. Therefore, it could be argued that individuals should be encouraged to have children. In addition, when children are already born, not providing for them may trigger negative social outcomes through increased poverty and neglect (McDonald 2003: 371).

Family policies may also favor one norm of the family over other family forms. In most advanced Western countries in the first half of the twentieth century,

family allowances favored the family where the father was employed, whilst the mother stayed at home to care for the children. France is a good example of this male breadwinner model. Through incentives rather than coercion (as was the case with the 1920 law banning abortion and the publicity for contraceptive methods), France's 1939 Family Code enabled the fertility increase that occurred eventually in the mid-1940s (Chesnais 2006: 441–442). In 1945, the generous Social Security complemented the Family Code and, around 1950, the support for families culminated at 45% of public social expenses. Just after World War II, the TFR in France was 0.5 children higher than the TFR of its European neighbors.

In France, the outcome of cash transfers for children (*allocations familiales*) was undeniable. By largely offsetting expenses involved with large families, such payments ensured a longer and more sustained baby-boom than in other European countries. However, the impact of the policy was gradually undermined when incomes of families were being complemented by earnings of women. Since mothers had to abandon their jobs, at least temporarily, the loss of revenues for larger families could not be substituted with corresponding social contributions (Lévy 2007).

More generally, the male breadwinner model was also inequitable because it precluded giving allowances to single working mothers, which could allegedly weaken the marriage bond. Children with breadwinning mothers were also seen as vulnerable. With the advance of the women's liberation movement, such policies that had been condoned by the social values of the time were eventually discontinued. This led to the formulation of new family policies in developed countries. The conflict between old and new models of social and family organization is apparent in the comparison of Italy and Sweden.

Focus: Family Policies and Cultural Beliefs in Italy and Sweden

Italy is a country of 60.5m inhabitants (Population Reference Bureau 2010a). Italian families are rather patriarchal, and households are often multigenerational. It is surprising that Italy, which attaches so much value to families and has rather conservative traditions with respect to family functioning, has such a low TFR (1.4 in 2010). Traditionally, out of wedlock births and divorces were not socially acceptable (in contrast to the Nordic countries), although this has changed dramatically in Italy during the last quarter of the twentieth century. Also, the role of Italian women and mothers is generally more conservative, and it is harder for an Italian woman to find employment compared to Nordic women (McDonald 2000: 3). Sweden, on the other hand, has a population of 9.4m inhabitants (Population Reference Bureau 2010a). Family policies have been one of Sweden's cornerstones. The country has promoted gender equity at home and on the job as an ideal, and it serves as a model for other nations. However, the Swedish TFR has fluctuated, depending on how strong the commitment was to an egalitarian and democratic social environment (Hoem and Hoem 1996: 1).

Over the course of the last 40 years, Italy has seen its total fertility rate (TFR) cut almost by half, going from 2.4 children per woman in 1972 to 1.4 in 2010 (these numbers, however, hide sharp contrasts between the industrialized North and the agricultural South). Italy has a lower TFR than the European continent as a whole. The TFR is even lower than one child per woman in some Northern regions (Emilia-Romagna, Lombardy, Piedmont, and Veneto). The classic image of a country in the South of Europe, traditional, Roman Catholic and thus fertile is no longer true. For Italy, the most important explanation for such a low TFR is probably radical changes in the respective roles of women and men, and a shift away from traditional family functioning. Women's education has

progressed to the point where women are now often more educated than men. This has modified their expectations and ambitions, increasing their participation in the labor force (although it is underestimated because women often work in the informal sector) and reducing their fertility to below-average levels. The inadequacy of the state's social protection in favor of children has made taking care of children more difficult and expensive, and so has precarious employment caused by greater flexibility in the labor market (employers are reluctant to offer open-ended jobs), and the difficulty of finding housing. All these factors help to explain the persistent low fertility in Italy.

On the other hand, Sweden (where 73% of the population is Lutheran) has been a country of sub-replacement fertility since the 1920s and has recently seen its TFR rise significantly: it was estimated at 2.0 children per woman in 1993 and it is 1.9 in 2010 (there are few regional differences in Swedish fertility levels, the country being quite homogenous). However, the TFR fell back to 1.5 children per woman in 2001. Nonetheless, the Swedish TFR, contrary to several European countries, never fell below 1.5 children per woman (the TFR for the whole of Europe was 1.4 in 2001). In Sweden, the policy to reduce discrimination toward women has enabled them to better juggle families and careers. Two-thirds of women are able to work part-time, and the state grants support for children's day-care. Finally, children's upbringing is divided, better than anywhere else in Europe, between women and men, as well as households and communities. Couples are deciding to make the most of the very favorable but sometimes temporary family benefits. The proof that financial incentives have an influence on fertility is that couples study them carefully when planning for a birth. Later, couples could come back to a lower fertility when incentives are not financed as generously (as exemplified by the change in Sweden's economic situation in the 1990s).

Two lessons can be learned from this comparison between Italy and Sweden. The first is the feminist paradox. More freedom does not enable women to reconcile modern life with replacement fertility. For this, they need also more autonomy, and more social recognition about their role in society. The second is the impact of public help, which enables women to use their new-found freedom. In the case of Sweden, the state's help, together with certain modern society's tendencies (rejection of materialism, return to traditional values, etc.) encouraged a rise in fertility (Chesnais 1996: 737–738).

The key challenge, especially for women, remains to reconcile family life with a professional career. Sweden appears to be one of the few countries in Europe to have succeeded in raising fertility through voluntary policies in the mid-1980s. Later, fertility declined again in Sweden because the country had to cut its public expenditures, as required by Brussels in order to join the European Union.

Family policies must address the conflicts between individuals and family approaches and also avoid supporting one family model to the detriment of another. With modern societies becoming more diverse and pluralistic, the challenge of family policies will be to find a common determination of the various social values along with appropriate policy measures acceptable to most people. This is a major challenge indeed, especially as financial means to satisfy all preferences in the society might not be readily available.

Reaching a Policy Consensus

The question of whether to address post-demographic transition imbalances and, in particular, *how* to address them remains sensitive. Without a doubt, issues at hand are difficult and policy choices, especially those needed to address sub-replacement

fertility and immigration, are particularly delicate. Notwithstanding these difficulties, the solutions to be implemented will determine to a large extent the future of these countries and the welfare of their populations.

With respect to the policies and regulations that are needed, one of the most pressing concerns is to obtain a policy consensus on which interventions to propose and to implement. This is necessary in order to muster the goodwill and commitment of the policy constituencies, namely political leaders, public authorities, and the media. In addition, one should enlist the support of demographers, political scientists, and intellectuals, whose contribution is important to inform the public debate and help design adequate policy responses. Finally, the support of all these constituencies will be also necessary for the implementation of the policies, as well as their proper monitoring.

In many industrialized countries, however, and particularly in Western Europe, population issues have been ignored for a long time. Moreover, the debate, if it occurs, is marred by controversy and passion. Non-interventionists are opposed by those who wish to take action, for instance increase fertility, and these interventionists are often jibed at without any objective analysis of the facts. Furthermore, there is an absence of a rational debate that would help reach a consensus on population issues. Demographic problems are not analyzed in a pragmatic way, free of political or ideological agendas, being too often framed by the traditional opposition between Left and Right. The fact that information sources and relevant stakeholders (i.e., administrations dealing with population issues) are fragmented makes the debate even more difficult.

Therefore, discussions on population issues are polarized. Policy actors seem to be torn between a laissez-faire attitude, which is akin to carelessness, on the one hand, and a desire to address population issues decisively and proactively, on the other. Indifference and lack of concern about demographic issues have often prevailed (Demeny 2003a, b). Malthusian attitudes, individualistic values and, occasionally, excesses of conservative and/or feminist ideologies have also played a role (Chesnais 1995: 17–28). Many demographers and intellectuals do not see the need to design policies to increase fertility. Some demographers have even dubbed a "demographic obsession" any interest into future population trends (Le Bras 1991). On the contrary, other demographers and intellectuals have highlighted dire scenarios should fertility remain below replacement levels, promising that soon an aging Europe would be overwhelmed by waves of immigrants (Caldwell 2009). These constituencies call for immediate actions, in particular to increase low levels of fertility and regulate immigration.

The question of whether to address post-transitional imbalances remains highly sensitive and, of all issues, the thorniest is how to intervene effectively. When it has occurred, this debate has often led, particularly in Western Europe, to confrontations along the traditional Left-Right divide (Teitelbaum and Winter 1998). The political Right has often been considered to be populationist, even pronatalist, while the Left is seen to be in favor of free choice or laissez-faire. In fact, Europe's history has seen regimes both on the Right (Hitler's Germany, Franco's Spain, Pétain's France, and Mussolini's Italy) and the Left (Stalin's Russia and Ceausescu's

Romania) take interest in population issues and try to slow down depopulation, for example through very restrictive abortion policies. Other, more neutral regimes have also advocated pronatalist policies, such as social-democrat Sweden in the 1930s, Britain in 1944, and Gaullist France after World War II. However, the memories of pronatalist policies designed by fascist regimes have remained vivid in Europe and these are often referred to when demographic issues are debated publicly (May 2005: 837).

The case of Sweden is of particular interest. A Swedish economist,[14] Gunnar Myrdal (1898–1987), and his wife Alva Reimer Myrdal (1902–1986),[15] both social democrats, co-authored in 1934 *Kris i befolkningsfrågan (Crisis in the Population Question)*. They studied declining birth rates in Sweden and proposed possible solutions. Their basic premise was to find social reforms needed to allow for individual freedom (especially for women), while also promoting childbearing. The volume triggered the debate that eventually led to the creation of the Swedish welfare model. However, while heralding many sweeping social reforms seen as positive for Sweden, the book also advanced some eugenic ideas and promoted compulsory sterilization programs, which were actually practiced in Sweden until 1975.

One should also mention here the pioneering work by David V. Glass (1911–1978). In order to stimulate the population debate in England and Wales, he documented pronatalist measures in Germany, Italy, France, and Belgium, with an emphasis on family allowances. This research, undertaken for the Eugenics Society, was concerned about Britain's low birth rates and published in *The Struggle for Population* (Glass 1936). Thereafter, Glass issued in 1940 *Population Policies and Movements in Europe* (Glass 1940/1967). In that considerably expanded volume, he added new theoretical insights and included the case of the Scandinavian countries into his inquiries on pronatalist policies throughout Western Europe (Langford 2003).

More recently, in France, population interventionists clashed with partisans of the laissez-faire. In January 1996, five French sociologists and demographers issued a two-page manifest to alert authorities and the general public as to the gravity of the demographic situation in France and Western Europe. The authors stressed that the decline of fertility was not a fatality and called for significant investments in future generations, hence the title of their manifest *SOS Jeunesse!* (*SOS Youth!*) (Sullerot et al. 1996). The authors did not mince words. The text, with its polemic style, was meant to create a jolt and it did. In particular, the manifest promoted family values and attacked the French family policy. The appeal was endorsed by many prominent personalities from all political currents, including the Left. The document was widely covered in the media. Although one of the initiators of the manifest

[14] Gunnar Myrdal was awarded the Nobel Prize in Economics in 1974 for his "pioneering work on the interdependence of economic, social and institutional phenomena".

[15] Alva Reimer Myrdal was awarded the Nobel Peace Prize in 1982, in acknowledgement of her activities for disarmament.

worked at the *Institut national d'études démographiques* (INED), Patrick Festy, its Director, deemed necessary to distance the institution from the content of the manifest. He could have argued that INED needed to remain impartial, but instead he claimed that the document was not scientific. He added that sub-replacement fertility was not the problem of the day, perhaps the problem of tomorrow although no one was sure of its magnitude. Eventually, *SOS Jeunesse!* was dismissed altogether as a mere attempt to restore the moral order of yesteryear, without any serious discussion of the substance. Again, the politically correct view prevailed that increasing sub-replacement fertility was not an issue and definitely not a cause worth promoting publicly (Sévillia 2004: 214–216).

Another conflict lies between the time horizon of demographers, who project populations several decades ahead, and that of politicians, who usually think about forthcoming elections and the next few years. The absence of a serious dialogue on population issues has also been caused in part by the scarcity of in-depth, quantified studies on population policies and their effectiveness. Indeed, it is relatively difficult to understand demographic problems in all their complexity (Véron 1993: 213–214). The lack of comprehensive studies is also a problem: in some countries, elements necessary to understand the demographic situation are to be gathered from different sources (national statistics offices, social security services, retirement funds, immigration services, etc.). However, in-depth reports on European demographic issues have been prepared until 2005 by the European Population Committee, an intergovernmental body of the Council of Europe.

This debate on population policy is made even more difficult by several apparent contradictions. A current increase of the population is sometimes observed at the same time as a decrease in fertility, which compromises the renewal of generations, but only over the long run (France's case). In France, far from negligible levels of immigration can give the impression of a strong foreign presence, but immigration should in fact be much more important to counter the consequences of low fertility and population aging.

Finally, one should also mention the gap between social behavior, on the one hand, and norms and policies proposed by public authorities, on the other. Post-industrial societies have facilitated the assertion of individualistic values, which have often conflicted with public policies and values and/or teachings of religious institutions. The Roman Catholic Church, for instance, has seen its doctrine challenged by the eruption of new secular attitudes. As a consequence, Christian societies and even Catholics themselves have to a large extent ignored Church's norms on modern contraception.

Focus: Roman Catholic Views on Modern Contraception

The first condemnation of what the Roman Catholic Church calls "artificial" (modern) contraception was formulated in 1930 by Pope Pius XI (1857–1939, Supreme Pontiff from 1922 until his death) is his encyclical *Casti connubii* (Of chaste wedlock) (Noonan 1965: 426–427). This was done to distance the Church from the Anglicans who had just approved these methods at the Lambeth Conference (Noonan 1965: 409; Protestants have been more flexible on the subject of modern contraception). However, Pope Pius XII (1876–1958, Supreme Pontiff from 1939 until his death) had authorized in 1951 the use of periodic

abstinence during the fertile period of the menstrual cycle for medical, eugenic, economic, and social reasons (Noonan 1965: 445–446). The advent of the hormonal contraceptive pill in the early 1960s forced the Church to revisit the issue.

The 1962–1965 Vatican Council II endorsed the notion of responsible parenthood in its Constitution *Gaudium et Spes* (Joy and Hope). However, it did not discuss the sensitive subject of birth control. Shortly before his death, Pope John XXIII (1881–1963, Supreme Pontiff from 1958 until his death) created a Pontifical Commission composed of theologians, experts, and laymen to study issues pertaining to population and the family. The future Pope John-Paul II (1920–2005, Supreme Pontiff from 1978 until his death) was a member of the Pontifical Commission. He did not attend any of its meetings but wrote confidential reports to the Pope and friends in the Vatican to promote his conservative views. The Commission continued its work under Pope Paul VI (1897–1978, Supreme Pontiff from 1963 until his death), who had been torn on the issue of contraception (Wills 2000: 73–103). In 1966, the Commission gave its concluding opinion, adopted with a large majority, in favor of the use of modern contraception (Wattiaux 2008: 375–376). This was in line with the doctrinal renewal of the Vatican Council II. However, under the influence of a few conservative personalities, a minority report was prepared and given to the Pope whilst the so-called majority report was simply ignored. Thereafter, the Church renewed its condemnation of modern contraceptive methods in the famous encyclical *Humanae vitae* (On human life) released in 1968. The encyclical sided with the tiny minority opposed to any change (McClory 1995: 129–137; for a comprehensive history, see also Küng 2008). Pope John-Paul II, whose intervention was influential in adopting *Humanae vitae* (Cardinal Karol Wojtyla was at the time Archbishop of Krakow, Poland), later reiterated his staunch opposition to modern contraception both in his doctrinal documents and public interventions (Grémion and Touzard 2006: 92 & 90). His strict line has been maintained so far by his successor Pope Benedict XVI who reaffirmed the Church's doctrine on the 40th anniversary of *Humanae vitae*.

The Church's position is the respect of the sacredness of human life and its transmission, which must take place within the boundaries of marriage. In addition, every sexual act should be potentially "open to life". Since Holy Scriptures can hardly be invoked on the issue of contraception, the Church's arguments are based on Tradition as well as moral and natural law. The Church authorizes only so-called natural contraception, essentially symptothermic or periodic abstinence, also known as the Ogino-Knaus, temperature and/or vaginal secretions (Billings) methods. The Church also displays an optimistic culture and ascribes a major role to Providence. This outlook is resolutely anti-Malthusian, although it is not necessarily pronatalist. It calls for a better sharing of wealth as opposed to the materialistic, individualistic, and hedonistic tendencies of post-industrial societies. The Church also insists on the dangers of a demographic collapse in developed countries. Although the Church expresses its doctrine mainly through the Pope, its position is far from being homogenous and dissensions have been voiced within the institution.

Although the Church's teachings concerning modern contraception have undeniably been misrepresented and even at times unfairly ridiculed in the media, there remains a gulf of incomprehension between the Church and the modern world, including the 1.2bn Catholics themselves. Confident that the Pill would be approved eventually, large numbers of Catholic women had started to use it in the early 1960s, whereas *Humanae vitae*'s condemnation was promulgated only several years later. After all, the Pill had been developed, along with others discoverers, by John Rock (1890–1984), a devout Catholic who strongly believed that it was a "natural" method of birth control (Gladwell 2000: 52). Many Catholics were also taken aback by the negative approach adopted in *Humanae vitae* and its harsh language (e.g., "illicit methods", "grave sin", etc.), a radical departure from the ethical approach of personal responsibility outlined in the Vatican Council II. Pope Paul VI was so shocked by the adverse reactions to *Humanae vitae* that he never issued another doctrinal document during his remaining years. Today, with the HIV/AIDS epidemic, many Catholics

do not understand the Church's opposition to the condom: since every sexual act should be "open to life" should it not also, as a corollary, be "closed to death"? Numerous Catholics are also disturbed by the declarations of some Church leaders emphasizing the danger or even the ineffectiveness of condoms in preventing the transmission of HIV/AIDS. In all fairness, other prominent Church leaders, such as Cardinal Lustiger (1926–2007) have urged people not to transmit death, i.e., implicitly to use condoms, and this was prudently endorsed by the Pope in 2010 (Benedict XVI 2010: 118–119).

From an institutional perspective, the Church appears as not wanting to contradict its previous teachings condemning modern contraception (Wills 2000: 89–98). Since the Church's position was rationalized with natural law arguments, it became ensnared in a technical debate on methods. Moreover, although the Church promotes responsible parenthood and admits natural family planning methods, it did not seize the opportunity to organize wide-scale natural family planning programs in developing countries, where Catholic relief and missionary organizations contribute so much to the health sector. In fact, Catholic-sponsored natural family programs provided only a small fraction of what is needed to tackle rapid population growth through effective fertility reduction, as was the case in Rwanda (May et al. 1990: 24 & 27–28).

Today, Church's efforts to stop or at least slow down the spread of modern contraception have mostly failed (Catholics for Choice 2008). In its attempts to influence international decisions on population, the Church had used its dual status as state and NGO (Kissling 1994), its worldwide network of influence (e.g., during the 1994 ICPD; see Valette 1996: 159–171) and, more recently, activist groups such as *Opus Dei*. The Church's effective opposition to contraception must be mentioned in several countries, e.g., Benin, Poland, the Philippines, and to some extent Ireland (Kissling 1994: 328; Ruiz Austria 2004). At grassroots level, however, many priests and nuns have largely ignored the ban of their hierarchy and distributed modern contraceptives anyway, as a matter of urgency and compassion. Efforts of the Church to impose *Humanae vitae* appear to have fallen on deaf ears, even among faithful Catholics. Since the encyclical was largely rejected, the Church lost a great deal of credibility and authority. In fact, the encyclical may have had an unforeseen consequence as it enticed Catholics to rely on their own conscience for their moral decisions. On sexual and reproductive matters, they now decide for themselves.

Conclusion

Developed countries are addressing in various ways their three main demographic challenges, i.e., sub-replacement fertility, population aging, and immigration. Policies to increase low fertility levels have generally yielded mixed results. Although some countries, like France, have been relatively successful in this area, other countries, as in East Asia, have obtained few concrete results so far. Regarding population aging, interventions have been essentially geared at adapting the society to the phenomenon. However, such interventions have been consistent neither across countries nor over time. Finally, immigration policies do vary greatly, according to the status of the country as immigrants' seeker or not. Immigration flows are also volatile and very sensitive to changing economic conditions.

Socioeconomic regulations in developed countries have also taken the precedence over traditional population policies that have been designed and implemented in developing countries. The pitfall of the former interventions has been the lack of coherence of socioeconomic regulations that were proposed by

diverse constituencies and implemented by various actors and institutions. However, developed countries have been more successful in designing and implementing family policies. Finally, the major challenge has been to reach a policy consensus on the most difficult issues, namely the need to increase fertility and regulate immigration.

The effectiveness of proposed policies and socioeconomic regulations remains a question mark, which the next chapter will address.

Chapter 8
Effectiveness of Population Policies

Measure what can be measured, and make measurable what cannot be measured.

Galileo Galilei (1564–1642)
Italian physicist and astronomer

This chapter addresses one of the most difficult issues pertaining to population policies: their effectiveness. As population policies are being implemented, sometimes at great costs, policymakers want to measure their effectiveness and efficiency, as well as the time frame needed to obtain results. Policymakers also want to be informed about the usefulness of specific interventions and policy levers (Chasteland 1989: 89–109; see also Gendreau et al. 1994). In addition, those who implement policies need to be clear about the definition of inputs, outputs, and outcomes of different programs. Finally, policies that are effective according to specific criteria (e.g., reduction of fertility) may bring other unintended and sometimes adverse consequences (e.g., in areas of human rights and equity). These effects are to be taken into account as well when proposing, implementing, and assessing specific population policies.

Requests for evidence-based policies and programs have emerged in recent years, along with the drive for greater effectiveness, efficiency, and accountability. In this context, population policies are expected to yield concrete results. In practical terms, this implies that national and international funds, which are difficult to secure, must prove to be efficiently spent. Moreover, public authorities, who to a large extent implement and monitor the policies, must be accountable to their constituencies.

The evaluation methodology of population policies and programs has also improved during the past decades as more data has become available (see Chap. 5, *Focus: The International Drive to Collect Demographic Data*). More resources have also been devoted to programs' monitoring and evaluation (M&E). Nevertheless, the evaluation of population policies presents its own specific challenges. First, one needs to assess the relevance and usefulness of the policy measures that are proposed. Second, one must choose the right set of indicators to measure the effectiveness of

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_8, © Springer Science+Business Media B.V. 2012

population policy interventions. Third, efficiency (i.e., cost-effectiveness) analyses must be conducted to ensure the optimal use of human and financial resources. Fourth, the time frame of policy interventions must be assessed as well, because some policies may bring results sooner than others. Fifth, comparisons are also needed between specific interventions and across countries, for instance by using the methodology of benchmarking. Finally, results of the policies also need to be examined against national commitments and pledges made internationally.

This chapter first explores the evaluation methodology of population policies and examines how to measure their impact. Then, it analyzes the overall results of one component of population policies, namely family planning programs, with an emphasis on the case of China. Broader policy interventions, such as education and women's empowerment are also covered, and illustrated with an analysis of the situation in Ethiopia. The chapter then assesses the effectiveness of advocacy and policy dialogue in triggering the development of population policies. The experiences of developed countries are also examined. Finally, the chapter concludes with a review of various attempts to model population policy interventions, in particular the Bongaarts' model of the proximate determinants of fertility.

Measurement Methodology

The accuracy of an evaluation of population policies, including family planning programs, depends on the methodology and measurement tools employed. Meaningful indicators must be selected as they are to account for programs' inputs, outputs, and outcomes to be measured; as much as possible, an evaluation must seek to attribute changes to specific interventions. In practice, evaluations are important tools for understanding whether and where a program has succeeded, if there are shortcomings, and where improvements need to be made. Evaluations are also fundamental in assessing a program's overall effectiveness.

The concept of *effectiveness* refers to the effects or results expected from the interventions proposed. The notion of efficiency, or cost-effectiveness, addresses the question: how well can things be done with limited resources? Therefore, efficiency measures results against costs of implementing specific policies or programs.[1] The concept of time frame refers to the time span during which outcomes or results[2] are expected to be achieved (these outcomes can be intended or unintended, positive and/or negative; see OECD 2002: 33).

In order to be implemented, population policies must translate their objectives or goals into programs. The implementation of such programs can be decomposed into three stages, namely inputs, outputs, and outcomes. The *inputs* are "the financial,

[1] The notion of *efficacy*, i.e., the capacity to produce an effect, usually pertains to results obtained in controlled conditions.

[2] Sometimes, outcomes are linked to specific objectives, and results to a change.

human, and material resources used for the development intervention" (OECD 2002: 25). The inputs lead to the *outputs*, i.e., "products, capital goods and services which result from a development intervention" (OECD 2002: 28). The outputs then lead to *outcomes* or results, i.e., "likely or achieved short-term and medium-term effects of an intervention's outputs" (OECD 2002: 28). Outcomes are measured with one or several indicators (see also Mandl et al. 2008: 3). The ascription of a causal link between a specific intervention and observed changes is called *attribution* (OECD 2002: 17).

This can be illustrated with the example of fertility reduction. If the objective of the population policy is to decrease fertility, this goal can then be translated into a family planning program as a mean to achieve the initial objective (other social interventions, such as promoting girls' education, can be implemented to decrease fertility in addition to family planning). The family planning program includes inputs, e.g., construction of health centers, training of health personnel, purchase of commodities (contraceptives), and information, education, and communication (IEC) campaigns. Presumably, at the next stage, health centers are functional, personnel are trained, commodities are available, and potential clients know about contraception and are willing to use it.

The output will be the availability of family planning and potentially other reproductive health services. These services will be offered at some level of quality, which can also be measured. The use of contraception (usually modern) will also be an output, since it is anticipated that more clients that have the proper information will visit functional health centers staffed with competent personnel and stocked with ample supplies. The change (increased use of contraception) will be measured by a performance indicator such as the contraceptive prevalence rate (CPR), i.e., the number of women aged 15–49 in union using a contraceptive method divided by all women of reproductive age in union. Finally, fertility reduction, which is a result or outcome, may be ascribed, or not, to the specific intervention, i.e., the increase of the supply of, and information on, contraceptive methods.

Before translating policy objectives into programs, the first question that policymakers need to consider is whether proposed interventions and policy levers are *relevant* for the goals being pursued. The answer to this question is usually straightforward as far as mortality and fertility are concerned, since mortality and fertility reductions require specific interventions (e.g., immunization campaigns or family planning programs, respectively[3]). Population aging and immigration policies, however, are more complex, and it is more difficult to identify their relevant policy levers. In addition, immigration policies usually have less impact on migratory trends than the prevailing economic conditions in the countries receiving immigrants and/or those sending emigrants.

The question of the relevance of various interventions and policy levers may be asked in two different ways. First, one may list what interventions are needed to,

[3] However, education has also an effect on fertility, independently of family planning.

say, reduce fertility and increase contraceptive use, with reference to inputs and outputs mentioned above. However, the question can be posed differently, in terms of barriers that need to be overcome to ensure adequate delivery of family planning services. In developing countries, such barriers can be geographical, medical, cultural, and financial, and can be linked to poor status of women, lack of choice of methods, and fear of side effects (Campbell et al. 2006). The latter approach, i.e., identifying the stumbling blocks to contraceptive use, is more practical and may help design more efficient programs. This was confirmed by a study in Nepal, which showed that sources of contraceptive method from non-government services, high level of information given, one-to-one counseling, satisfaction with services, and shorter travel time to sources of supply were associated with lower odds of contraceptive discontinuation (Gubhaju 2009: 66 & 68–69).

Next, one needs to choose the *right set of indicators* to measure the effectiveness of policy interventions. Effectiveness can first be measured in terms of specific results, according to key performance indicators (KPIs). Again, a commonly used performance indicator is the contraceptive prevalence rate. Other key performance indicators can be used for other demographic variables, for instance the infant mortality rate, i.e., the number of deaths of children under 1 year of age for 1,000 live births, or the child and infant mortality rate, i.e., the number of deaths of under-five children for 1,000 live births (Baroudi 2010: 443–446). The main purpose of these KPIs is to measure the demographic impact of the actions undertaken. Quantitative evaluation is usually done with reliable demographic data (e.g., survey data), collected at regular intervals, which are needed to monitor KPIs.

The evaluation of population policies and programs can also be done through qualitative studies, which complement and often help clarify data obtained from quantitative evaluations. Typically, qualitative evaluation methodologies can explain why certain programs are performing as they are and reveal specific deficiencies in programs and/or service provision. For family planning programs, the two main types of qualitative evaluation are assessments by beneficiaries, on the one hand, and assessments of service providers themselves, on the other. The purpose of beneficiary assessments is to collect perceptions of programs' beneficiaries in order to improve the effectiveness and eventually the quality of service delivery. This allows a better understanding of the views and behavior of beneficiaries themselves (Salmen 2002: 1). Such beneficiary assessments may take place through qualitative research methods, which include direct participants' observation, surveys, focus-groups, and conversational interviews (Salmen 2002: 8–11). Similar methods are used for the assessment of services providers, yet it is *their* performance that is being examined. Participatory evaluations are done in conjunction with representatives of the program being evaluated, while formative evaluations are intended to increase the performance of those implementing the programs (OECD 2002: 23 & 28).

In addition to the most common qualitative tools, the "mystery client" technique has been used to assess some family planning programs. A mystery client is a trained participant who fits the profile of an intended beneficiary and is able to observe services delivery staff, their interaction with clients, and their performance and

competence more generally.[4] In the case of Haiti in the 1990s, the mystery client technique helped uncover shortcomings, including the lack of informed choice and paternalistic attitudes of medical staff (Maynard-Tucker 1994: 306). Overall, it is assumed that services of better quality will lead to their increased use.

The *efficiency* or *cost-effectiveness* of population policies is measured by estimating costs and benefits of proposed actions, so as to be able to choose most economical programs and make optimal use of human and financial resources to achieve the desired results. Cost-effectiveness analyses also enable policymakers and implementers to better understand programs' unit costs. Cost-effectiveness or cost-benefit analyses[5] can also be conducted as a mean to inform the policy dialogue and convince policymakers to launch specific programs, for instance by showing the savings that family planning programs (through averted births) can bring to the education sector. Finally, technical efficiency, which assesses the results of the programs, should be distinguished from allocative efficiency, which looks at the deployment of resources through the prioritization of most cost-effective approaches.

The *time frame* of policy interventions is harder to measure. A tool most commonly used in this respect is to project the populations over time by using different assumptions (see Chap. 5, section "The Availability of Population Projections"). In order to evaluate the time frame of family planning programs, one may use population projections to estimate future fertility levels as determined by the proximate (biological and behavioral) determinants of fertility (see, later in this chapter, *Focus: The Bongaarts Model of the Proximate Determinants of Fertility*). Interventions on the proximate determinants of fertility (e.g., contraceptive use) may bring results sooner than efforts geared at the intermediate determinants of fertility, such as the education of women.

Last but not least, *comparisons* are also needed between specific interventions. This may be done through the use of benchmarks, which are "reference point(s) or standard(s) against which performance can be assessed" (OECD 2002: 18). Benchmarks refer to performances achieved in the recent past by other countries and/or similar programs. Benchmarks are not targets, but rather programmatic objectives. For infant mortality reductions programs, programmatic objectives would try to emulate results obtained in similar conditions. In the case of fertility reduction programs, annual percentage point increases of the contraceptive prevalence rate may be used as program objectives. Benchmarking against countries that have been successful in their family planning programs indicates that an annual 1.5 percentage points increase in the CPR is associated with positive outcomes.

[4] This method, most useful to provide a user perspective, was first used in Nepal in the early 1980s; see Schuler et al. (1985).

[5] Cost-benefit analysis is a technique used to decide whether to intervene or not to make a change. Such an analysis compares the value of benefits from the change under consideration and the costs associated to it. When considering family planning programs, a program with a high benefit-cost ratio will take priority over one with a low benefit-cost ratio (the ratio is determined by dividing the projected benefits by the projected costs); see United Nations (1997).

These objectives are in line with the Cairo Agenda: they are not coercive, but determined essentially by unmet needs for contraception.[6] On the contrary, pre-Cairo global targets of fertility reduction often implied arbitrary reductions in levels of total fertility rates (TFR). Similarly, population projections have usually relied on normative assumptions of fertility decline instead of policy-driven assumptions (see Chap. 5, section "The Availability of Population Projections").

Effectiveness of Family Planning Programs

A key dimension of family planning efforts is the evaluation of their effectiveness (or impact) as well as the measurement of the specific results being obtained. In this respect, the experience of several decades of family planning programs and the wealth of data provided by global demographic survey programs, especially the Demographic and Health Surveys (DHS) have made it possible to measure progress accomplished during the past 50 years or so. In the vast majority of countries, these surveys have revealed improvements in child health, declines in fertility, increased knowledge and use of modern contraceptives, and elements of women's empowerment.

Family planning programs contributed to these changes although their effects have varied, influencing in different ways reproductive behavior and related factors. In assessing the effectiveness of family planning programs, what qualifies as "effective" varies with program designs, policy objectives, and specific contexts. For one program, decreasing fertility among adolescents may be the primary objective. Another program may seek to promote family planning options in order to reduce the number of induced abortions. Therefore, a family planning program is usually reviewed in relation to what is seen as effective, and the criteria of effectiveness cannot be characterized universally. Establishing the effectiveness of family planning programs is complex because such programs interact with many other dynamics and policies. These include poverty alleviation efforts, education strategies, and/or gender policies, all factors that may facilitate or hinder programs' effectiveness. Further, the effects of certain family planning programs may only appear many years after implementation, making the evaluation of effectiveness in the short-run difficult and possibly misleading. All these elements help illustrate the difficulties involved with measuring the effectiveness of family planning programs. Still, there is a wealth of evidence available that demonstrates the success of family planning programs, and fertility decline has generally been used as a major criterion to establish this success. Moreover, family planning programs have also brought about additional outcomes such as reductions in child mortality, investments

[6] They are defined as "the proportion of women not using contraception who either want to cease further childbearing (unmet need for limiting) or who want to postpone the next birth at least two more years (unmet need for spacing)"; see Westoff (2006: 1) and World Bank (2010b).

in children's human capital, improved economic status of households, and macro-impacts on communities (Joshi forthcoming).

Although the literature[7] shows that providing family planning services reduces fertility levels, there is disagreement on the size of the programs' effects (World Bank 2007a: 88–89). Evaluating properly the impact of family planning programs is difficult and raises methodological issues. When a government is interested in reducing fertility levels, it could place family planning programs in areas with the highest fertility, i.e., where it is most needed. In comparing areas with and without the program, effects of interventions on fertility may then be underestimated because other characteristics of the environment, unobserved by the analyst, might increase fertility. These characteristics could be seen inadvertently as features of the program, which is assumed to be the only difference between the two areas. This is commonly referred to as *program placement bias.* Not taking account of the non-random placement of programs may lead to substantial biases in estimated program effects (Pitt et al. 1993; see also Rosenzweig and Wolpin 1986).

Another difficulty is how to measure effects of family planning programs which are multi-dimensional. Most studies of family planning programs use simple measures of access such as the distance to a health center providing family planning services. Ideally, access should be measured in more complex ways to incorporate various dimensions of family planning programs that affect contraceptive use, including the method-mix available, supplies of commodities (frequency of stock outages), quality of staff providing services (and absenteeism), quality of health facility's infrastructure (comfort, cleanliness, etc.), and costs.

Randomized controlled trials (RCTs),[8] a powerful though controversial tool for rigorous evaluation (Banerjee and Duflo 2011: 14) have rarely been used to measure the effectiveness of family planning programs. A RCT is an experiment often used for assessing healthcare services. It is based on the random distribution of services or treatments to participants in order to eliminate selection bias, participants receiving blind treatment, and obtain the most accurate possible evaluation. There are different ways of carrying out such trials. They can differ in design, what is being measured (e.g., effectiveness), and how randomization is implemented. In some cases, testing a treatment or service in one group is assessed against a control group not receiving the same treatment or service, and in other cases the trial compares different kinds of treatments between groups.

It is only in Matlab, a rural region East of Dhaka in Bangladesh that an experimental family planning project using a RCT had attempted to assess whether

[7] This section draws heavily from: World Bank (2007a).

[8] The RCT technique has long been used by the medical profession, but has been used more and more by economists over the past 15 years under the title "randomized experiments". The Abdul Latif Jameel Poverty Action Lab at the Massachusetts Institute of Technology, Cambridge, MA, has conducted a randomized experiment on contraceptive adoption, fertility, and the family in Zambia; see http://www.povertyactionlab.org/evaluation/contraceptive-adoption-fertility-and-family-zambia, accessed on January 16, 2011.

efficient service delivery could increase contraceptive use as well as initiate and sustain fertility decline.[9] From 1977 to 1996, in approximately 70 villages in Matlab, a family planning outreach and child and maternal health program operated on a door-to-door basis (Joshi and Schultz 2007: 1). Indicators were consistently monitored in contrast to 79 other villages in the area, with similar socioeconomic dynamics, where the population was only receiving basic government health-care services (Joshi and Schultz 2007: 2).

Overall, studies in Asia, Latin America, and sub-Saharan Africa estimate the dampening effect of family planning programs on lifetime fertility at between 0.5 and 1.5 children, but most studies point to the lower end of this range. Effects differ depending on the length of exposure to the program and its intensity and implementation effectiveness (Banerjee and Duflo 2011: 112). In the Matlab experiment, fertility was estimated to be 24% lower in villages that had received the intensive family planning program than in other villages (Phillips et al. 1988). Some argued that these results reflected a level of program intervention and intensity that was not sustainable (Pritchett 1994): the program was exceedingly expensive, almost 35 times the normal cost per woman reached by running a standard government family planning program.[10] A more recent analysis of the Matlab subdistrict suggested a decline in fertility of about 15% in program villages compared with control villages (Joshi and Schultz 2005). At about six children per woman on average, this resulted in a reduction of 0.9 children. The program resulted in lasting welfare improvements. Indicators on household income, women's health, and child education and health reveal that significant gains were made throughout the period of the study (Joshi and Schultz 2007: 2). The project highlighted the feasibility of effectively reducing fertility levels in developing countries that had not made significant progress in other areas of development. It highlighted the impact family planning programs can have toward achieving other development, health, and education objectives.

Another study that sought to measure the effectiveness of family planning programs took place in Ghana. In an attempt to implement practical field trials in relation to community health services, the government launched a Community Health and Family Planning project in the Navrongo area in 1993, and interventions began in 1995 (Doctor and Bawah 2005: 4 & 6). Demographic surveys were then regularly conducted in the area. A longitudinal study by Doctor and Bawah compared fertility preferences before the project, as expressed in the baseline survey, to results of surveys carried out in 1995 and 2002. It showed that the proportion of women wanting more children had declined and women were changing preferences toward smaller families (Doctor and Bawah 2005: 10 & 15).

[9] The experiment was conducted under the auspices of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B).

[10] Pritchett estimated each averted birth at USD180 in 1987, equivalent to 120 % of Bangladesh's GDP per capita at the time; see Pritchett (1994: 38).

A study from Tanzania suggested that family planning programs reduce fertility levels and further indicated that effects vary with the type of, and distance to, outlet and how old a woman was when the program was introduced. The study reported that a woman exposed to family planning would have 4.1 children, instead of 4.7 children in the absence of family planning interventions. This result masked differences between different types of outlets: health centers are substantially more effective than hospital and dispensaries (Angeles et al. 1998). These findings are similar to those reported for PROFAMILIA of Colombia where exposure to family planning throughout the childbearing age of a woman was estimated to reduce lifetime fertility on the order of 0.5 children (Miller 2005). Family planning led to a substantial postponement of the first birth, which in turn led to higher education for young women with important inter-generational effects in terms of child health and education. Despite the sharp decline in fertility in Colombia, only around 10% of the decrease was explained by family planning programs. In a more recent study from Peru, exposure to family planning programs throughout childbearing age was simulated to reduce the number of children born by 1.3 children for women with no education and by 0.9 for women with 10 years of education (see Angeles et al. 2005a, b). These results highlight the critical importance of education. Women with no education are predicted to have 2.5 children more than those with 10 years of education in the absence of family planning, and 1.2 children more when family planning is available. This shows that family planning might partially substitute for lack of education.

One of the most successful, but also one of the most controversial, family planning programs ever conducted took place in China, which has the largest population on earth. Although the program achieved impressive quantitative results, there was nothing voluntary or free about it. Its coercive implementation was a violation of internationally agreed human rights conventions. In particular, the program was in direct contradiction to the underlying principle of family planning programs, first elaborated at the 1968 International Conference on Human Rights in Tehran.

No wonder, therefore, that the Chinese population and family planning policy stirred lots of passions and generated a vast literature, although the most interesting sources are written in Chinese and hardly accessible to Western readers. Among the key references in English, one should mention Hardee-Cleaveland and Banister (1988), Scharping (2003), Greenhalgh and Winckler (2005), Poston et al. (2006), and White (2006). The Chinese experiment is worth examining, since it illustrates the difficulties of public policies when they venture authoritatively into matters of fertility and family life, before the 1994 International Conference on Population and Development (ICPD) in Cairo provided new policy directions emphasizing reproductive rights.

Focus: The Chinese Experiment

China, which comprises almost a fifth of the world population, addressed its demographic problems later than India. When the People's Republic of China was created in 1949, highest governmental authorities thought that a large population was advantageous for their country's development. In this respect, China followed the classical Marxist doctrine,

namely that population growth is an asset, or at the least, neutral for socioeconomic development.

Results of the 1953 Census showed that China's population was about 100m larger than expected, and this raised concerns about the need to curb rapid population growth. In his *New Population Theory* presented in 1957, the Chinese economist Yanchu Ma (1882–1982) estimated that "for food reasons alone, the population must be controlled" (Xinran 2010: 3). However, he encountered fierce opposition, not the least from Chairman Mao Zedong (1893–1976, President from 1949 until his death) (White 2006: 40). In 1960, Ma was forced to resign from his position as head of the Peking University. He was later placed under house arrest. Eventually, Ma was rehabilitated in 1979, after Chinese authorities had made a U-turn on the population issue.

The Chinese traditionally pronatalist policy was gradually modified in favor of more pragmatic measures. Reaching all regions (especially rural areas) in this vast country posed a major challenge. Attempts to launch a family planning program were not immediately successful, except in a few large cities. In addition, the Great Leap Forward policy (1958–1961) contributed to the disorganization of the country over several years, and slowed down the supply of family planning services. The first family planning successes on a national scale were achieved only in the 1970s.

Birth spacing and birth limitation programs were implemented in 1971. In the following year, the *Wan, Xi, Shao* program was launched (meaning "late, space, few"). Its aim was to increase the age at marriage and first birth, promote longer intervals between births, and also limit births. Birth quotas and pregnancy authorizations were instituted in 1979 under the so-called One-Child Policy, which was imposed on the entire population although exceptions were granted (at that time, the TFR of China was already below three children per woman; see United Nations 2009d: 184). This policy drew on Ma's initial reasoning that the state has the power to intervene in matters of reproduction. The policy itself was designed by Song Jian, a missile expert with no real knowledge of demographic dynamics (Greenhalgh 2005). Therefore, the One-Child Policy, designed to accompany the Four Modernizations of 1978, was instituted as fertility was already on a decade-long decline. The policy was implemented in cities, where it was easier to monitor. It was less effective in the countryside, where 70% of the population resides. Rural couples, who for economic reasons were often reluctant to adopt the One-Child Policy, were sometimes allowed to have two children (couples from ethnic minorities have been allowed to have three, sometimes even four children). However, despite exceptions to the One-Child Policy, not all rural couples could have two children (Wang 2010).

The socioeconomic status and traditional cultural values in China were not favorable to important internal migration movements. Before the 1980s, the *hukou* system of household residence created in the early 1950s, and which required the registration of households by law, limited the mobility of Chinese. It controlled citizen's daily lives by granting them subsidies for food, education, housing, medical services, and retirement. Traditionally, people had not been allowed to migrate freely (some had been forced to move to the countryside) and the *hukou* system also disrupted families. The modernization of the economy has since relaxed the system by giving people the possibility to move to cities, creating the phenomenon of the "drifting" population (an estimated 160m internal migrant looking for jobs).

The total population of China increased from 541m in 1949 to 1.17bn in 1992, while the TFR decreased from 6.1 to 2.0 for the same years, respectively (Poston et al. 2006: 12). However, it is difficult to assess the Chinese population policy at national level because marked disparities exist between different provinces as well as the modern coastal China and the traditional interior regions. It is also clear that the Chinese population and family planning policy, which is coercive and not at all voluntary, has had perverse effects. These included, but were not limited to, the degradation of woman's status as exemplified by abortions of female fetuses and infanticides or abandonment of girls at birth. This, in turn, has had profound social repercussions. The price Chinese couples paid for the population policy

was huge (Xinran 2010), especially as authorities attacked their material interests (fines and sanctions paid in kind) in order to force couples to conform to birth limitation measures. The Chinese program also has an Orwellian after-taste because of the state's meddling in the private lives of its citizens. For example, IUDs were obligatory after the birth of the first child, and forced sterilization was very frequent after the second birth. The One-Child Policy had also terrible consequences for parents who lost their only child, as was brutally highlighted by the tragedy of the May 2008 Sichuan earthquake.

The Chinese population and family planning policy fits in the Mandarin tradition of absolute power. It definitely accelerated the demographic transition and reduced some effects of the strong population pressure. Ironically, however, similar macro-demographic goals could have been obtained through a two-child policy accompanied by much delayed childbearing, although such a policy might have been hard to implement as well (Bongaarts and Greenhalgh 1985: 602–606). Instead, Chinese authorities strictly adhered to the One-Child Policy, a bureaucracy which formally employs half a million people (Wang 2010). The policy brought also adverse consequences to the age structure and caused rapid and irreversible population aging, before an adequate social protection system could be organized. China is now the most rapidly aging country in the world and projections show labor shortages in the next decade. It could also be argued that these drastic demographic measures only accompanied, rather than triggered, the country's demographic and socioeconomic evolution (Cai 2010: 433–435). The wide variations of the demographic evolution were also the result of the unstable political context (Poston et al. 2006: 8–19).

It is plausible that the strict population policy could be relaxed in the years to come (leading Chinese demographers have called several times for a discontinuation of the One-Child Policy; see Gu et al. 2007 and Wang 2010). However, research has shown that Chinese now have a small family norm, so fertility is unlikely to rise much even if the One-Child Policy is lifted (Hardee et al. 2004b: 72). Moreover, as Chinese become more affluent and individualistic, they might be less willing to accept new policy diktats from central authorities.

As mentioned in Chap. 6, section "Family Planning Spreads Around the World", family planning programs have been rather successful globally (Robinson and Ross 2007b: 422). Since the 1960s, when many programs were introduced, the family planning revolution has gained momentum. The 1994 ICPD marked another significant shift, this time from global targets to individual concerns (pre-Cairo family planning efforts had been less respectful of the desires of individuals).

Robinson and Ross (2007a) highlight several components of the success of the family planning programs around the world. In spite of differences in performance among countries, extensive national programs have "fundamental features that profoundly affect their effectiveness" (Robinson and Ross 2007b: 426). Generally, strong leadership enabled the efficient introduction and execution of programs, but the lack of such leadership weakened their performance. In relation to this, programs managed by ministries of health and structured around ministerial activities were more sustainable, especially when built around pre-existing NGO activities. Given the prioritization of other health issues, ministries of health sidelined family planning in some cases. This often led to the creation of population or family planning commissions and boards. These bodies then linked family planning programs to other ministries and their activities (Robinson and Ross 2007b: 426).

Family planning services were often linked to other development programs such as women's empowerment and education, contributing to their success. The addition of family planning to the delivery of basic services was employed by all

approaches and the use of various programmatic structures proved to be most efficient (Robinson and Ross 2007b: 428). The structures of service delivery were clinic- or fieldworker-based, and often a combination of both. Clinic-based structures were generally found in urban areas and run by NGOs in association with ministries of health. In contrast, fieldworker-based structures operated at a community level and were community-driven (and to be found most often in rural areas). Combinations of both approaches were common and often operated together with other complementary strategies such as public information through the media, leaflets, group meetings, and community education (Robinson and Ross 2007b: 428). An especially successful approach in providing services in rural and marginal areas resulted from efforts to de-emphasize the medical dimension of family planning and by making contraceptive methods readily available (Robinson and Ross 2007b: 427). In Thailand, prescriptions were not necessary to obtain modern contraception, which was made accessible at local pharmacies (Speidel et al. 2009b: 3054). In most countries however, the most common methods of modern contraception offered in rural areas were IUDs and sterilization, a wide variety of contraceptive options (such as the pill, condoms, injectables, etc.) being less common (Robinson and Ross 2007b: 427).

The availability of resources contributed to the success of programs, in terms of capital, infrastructure, human resources, provision of contraceptive methods, and other resources. Interestingly, programs' ability to compile data and track their performance was a major contributor to success. Robinson and Ross argue that the "program effort", i.e., the amount of effort put into the program's execution, was a major contributor to how successful programs became (Robinson and Ross 2007b: 430). By using a measurement formulated in 1972, the authors clearly show that the level of success achieved by several countries is a reflection of the level of "effort" that went into the program.[11] For example, a country that scored high on the effort scale, like Hong Kong, also had one of the highest increases in contraceptive use, whereas in countries initially scoring low on the effort scale, increases in contraceptive use were meaningful but did not reach the same levels as those with highest effort scales; this was the case in most of sub-Saharan Africa (Robinson and Ross 2007b: 433). Countries, like Hong Kong and South Korea, with high and early program effort underwent rapid change. In other countries, like Iran and Pakistan, with lower initial program efforts, the decline in fertility occurred at later stages. Actually, both the timing and degree of efforts contributed to different levels of decline in fertility (Robinson and Ross 2007b: 435).

In addition, a noteworthy trend since the early 1970s is that effort scores for the countries who initially scored low had more than tripled by 1999, while for some of the higher scorers it began to decrease in the early 1990s. The socioeconomic context certainly shaped these trends, which are revealing of changes in policy

[11] The program effort scale is based on 30 separate measures that are grouped into four components: policy, service, record keeping, and availability of methods; see Mauldin and Ross (1991): 351–352.

priorities nationally (e.g., Singapore attempted to reverse the low fertility level reached by 1989 and encourage more births) and internationally as the HIV/AIDS pandemic sidelined family planning efforts (Robinson and Ross 2007b: 432; Speidel et al. 2009b: 3049). The numerous changes in levels of performance that took place in the early 1990s demonstrate that fertility declines cannot be predicted and modeled precisely (Robinson and Ross 2007b: 432).

Additionally, in the most successful cases, development and modernization were drivers of fertility decline on their own, beyond the effects of family planning programs (Robinson and Ross 2007b: 432). In the literature on population, there has been a considerable debate about whether family planning programs generate significant declines in fertility or whether it is modernization and economic development that play the key role. Modernization and development create circumstances favorable to fertility decline, and take place irrespective of family planning programs. As already mentioned, a relation between higher levels of female education and lower fertility rates with a later childbearing age has been established (Schultz 2002). However, the evidence since the 1960s suggests that programs influenced fertility levels independently of the setting in which they took place. Fertility and its speed of decline responded to both development *and* family planning programs (Robinson and Ross 2007b: 436–437). However, this does not imply that development and family planning programs did not interact to generate positive (or negative) results.

Contraceptive use has resulted in significant decreases in fertility, as fertility has declined at an unprecedented rate since the introduction of family planning programs (Robinson and Ross 2007b: 435). Numerous developing countries could not have reached their current levels of fertility (and arguably of development), had family planning programs not been implemented. In spite of shortcomings and divergences in performance, family planning programs have succeeded in reducing fertility in the long run, minimizing the detrimental effects of rapid population growth in these countries. Similarly, socioeconomic development facilitated the pace of change and the success of family planning programs, by enabling more efficient provision of services and increasing demand for contraception (Robinson and Ross 2007b: 445). With extensive economic development, there is generally a desire for smaller families as children are no longer seen as assets for the household, but are associated with increasing costs. In Vietnam, this has been a major factor in decreasing fertility rates and the high number of abortions (Johansson et al. 1996: 106).

Broader Policy Interventions

To a large extent, the worldwide decline in mortality levels and the family planning revolutions were triggered by the supply of vaccines and contraceptives, respectively. But perhaps more importantly, they occurred also because profound changes had taken place simultaneously in socioeconomic conditions. With respect to

fertility levels, new attitudes toward reproduction as well as improvements of the status of women accelerated the transformation. These factors reinforced the demand for family planning services and eventually consolidated the success of the family planning programs.

Urbanization, labor participation, income, education (in particular female education), and women's status are among the most important socioeconomic changes that influence mortality as well as fertility levels. When it comes to mortality and fertility, these factors are usually called the intermediate or indirect determinants. However, other determinants influence mortality and fertility directly: these are called the proximate or direct determinants. Direct determinants of high mortality levels include pathogen agents of infectious diseases and vectors that carry infections (e.g., mosquitoes). Immunizations and impregnated bed-nets are meant to protect against these agents and vectors, respectively. Biological and behavioral factors that influence fertility directly are called proximate determinants (see in this chapter, *Focus: The Bongaarts Model of the Proximate Determinants of Fertility*).

Governments wanting to influence mortality and fertility levels usually address both types of determinants. Immunization programs mitigate the direct determinants of mortality. Likewise, family planning programs address the proximate determinants of fertility. Nevertheless, broader policy interventions are also deemed necessary to reduce mortality and fertility levels. In this respect, female education is a key policy lever for both mortality and fertility, and so is urbanization. Other intermediate determinants are particularly important for fertility, such as the status of women, women's participation in the labor force, female earnings, and the legal framework (e.g., age at first marriage).

It is not easy to measure the weights of the intermediate and proximate determinants of mortality and fertility, neither is it possible to disentangle the roles of the various intermediate determinants. With respect to fertility, the case of Ethiopia, which has been studied extensively (Teller and Hailemariam 2011; World Bank 2007a), offers a good example of the interrelation of the different types of fertility determinants.

Focus: Ethiopia's Strides to accelerate its Demographic Transition

Ethiopia is one of the poorest countries in the world with a gross national income of USD870 (PPP) per capita (2008 estimate), even though income growth is reported to have been the highest in Africa for the past 10 years. In fact, 86.4% of its population lives below 2 US dollars a day. Ethiopia is also at next to the bottom (ahead of Niger) of the 2010 Multidimensional Poverty Index (MPI) (Alkire and Santos 2010: 2). With an estimated total population of 82.8m in mid-2010 (a figure derived from the 2007 Census), Ethiopia is currently the second most populous country in sub-Saharan Africa after Nigeria and the 15th most populous country in the world. Ethiopia's population grows at an annual rate of 2.6% (based on the period 1994–2007), translating into an additional two million people every year. By 2050, Ethiopia could become the ninth most populous nation in the world. The population age structure is predominantly young, with 44% under age 15. The TFR remains high and was estimated at 5.3 children per woman in 2010 and the contraceptive prevalence rate (modern methods) is low, estimated at only 14% in 2005 (Central Statistical Agency and ORC Macro 2006), although this figure seems to have increased recently and might be close to 25% or even more. Historically, early age at marriage and low use of contraceptives have been the two main behavioral factors causing high fertility rates. Further, low

educational attainment and predominantly rural residence are believed to be major obstacles for an increase in contraceptive use (Population Reference Bureau 2010c).

A large majority of Ethiopians (85%) live in rural areas, and among these, most live on the highlands. Due in large part to rapid population growth and a focus on rural development, land holdings have more than halved over the past 40 years. In 2003, 14m people were threatened by drought-related famine (World Bank 2007a: iv). Since then, it is estimated that five million people are exposed to chronic food insecurity annually, while six to nine millions are vulnerable to acute food insecurity. These conditions are also dependent on factors other than rapid population growth, such as rainfall, crop yields, and policy. The lowlands could possibly accommodate more people although conditions there are harsh, but could be improved with irrigation and infrastructure. Many of those resettled in the lowlands fail and return to their areas of origin. However, plans to resettle 2.3m people in the lowlands would take care of only *one year* of population growth.

Rapid population growth has consequences for the social sectors as well. The government of Ethiopia recognized the challenge rapid population growth poses to development and poverty reduction. In response, it first boosted socioeconomic policies and implemented a rural-focused policy to slow down urbanization (although there has been spontaneous urban growth in small towns). The government emphasized female education as a key policy lever in its efforts to reduce fertility. Improved income and female education have all contributed to lowering fertility. It has been shown that just 4 years of female schooling at primary level (completed grade four) decreases fertility in Ethiopia (World Bank 2007a: 95–96), when it usually takes 8–10 years of schooling to have a similar impact in other sub-Saharan settings. However, the main changes relating to the impact of education on fertility have occurred at secondary levels and especially in urban areas. Despite improved female education, female employment levels remain low.

Still, female education had positive externalities on women living in the same community who did not have access to schooling, meaning that the latter women also have somewhat lower levels of fertility (World Bank 2007a: 83). It was estimated by the World Bank that providing all girls with at least 5 years of primary education by 2015 and assuming that about half of all women aged 15–19 would have some secondary education by 2030 would reduce the TFR by more than two children per women from 5.9 in 2000 to 3.8 in 2030. In addition, this assumes also that the supply in contraceptives will keep up with the ensuing increase in demand (World Bank 2007a: ii), although one could argue that the rising age of marriage and lower proportion of women in union may be as important as contraceptive use (Teller and Hailemariam 2011: 51–52).

The government adopted a National Population Policy (NPP) in 1993, which gave fertility and family planning targets and reinforced female education. This policy had three main strategies: foster gender equitable development, female empowerment through education, and overall income growth; create an enabling policy environment to address demographic issues; and expand family planning services. Part of the NPP included the reduction of rural–urban migration, which was achieved indeed but some scholars believe this was unfortunate to a certain degree, as it minimized certain benefits that accompany urbanization, including even lower fertility rates. Although certain aspects of the implementation of the NPP did not prove very effective, the contraceptive prevalence rate (CPR) target of 44% might be met by 2015. Since then, the Sustainable Development and Poverty Reduction Program (SDPRP) adopted in 2002 and the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) adopted in 2005, have highlighted the government's commitment to accelerate economic growth in order to reduce fertility levels.

More recently, the proposed Growth and Transformation Plan (GTP) drafted by the Ministry of Finance and Economic Development (MoFED) in September 2010, outlines the government's strategy for the period 2010/2011–2014/2015. Addressing population and development is a component of this strategy, which highlights the need to ensure "spatially balanced population distribution patterns with a view to maintaining environmental security and the scope of development activities" (The Federal Government of Ethiopia 2010: 74).

The strategies to achieve this include increasing awareness on population issues through media outlets, promoting smaller families, and educating the public on the linkages between population, environment, and development.

However, to correct imbalances between demographic and economic growth, the government's initial approach of increasing overall development and fostering gender equity (especially through female education), needs to be complemented with population interventions; this approach will help to accelerate the fertility decline. Such efforts have started in recent years with the Ministry of Health greatly expanding reproductive health and family planning services. Actions are needed in other sectors too, such as urban development, youth employment, land tenure, early marriage, and environment, in addition to improving family planning services provision and quality. There are also substantial potential welfare gains from a more concerted effort to expand family planning services. If the contraceptive prevalence rate increases from 8.1% (the value in 2000) to 44.7% in 2030, the net present value of the per capita welfare gain would be USD112 (World Bank 2007a: viii).

Ethiopia is undergoing its demographic transition and has only recently begun seeing a decline in fertility rates faster than the decline in mortality rates–typical of the third stage of the demographic transition. Today, only rural areas do not experience much change, while urban areas are reaching fertility rates close to or even below replacement fertility. Other factors have had an impact as well, such as the lower growth rates in the highlands (leading to adaptation responses on the part of Ethiopian households and lower fertility outcomes). Perhaps some ideational changes took place as well (i.e., changes in attitudes regarding smaller family size, female autonomy, and aspirations of youth), not to mention the progressive legitimation of induced abortion and enforcement of the new law on higher age at marriage.

While fertility rates begin to decrease, the proportion of working age people in the total population will increase, yielding lower dependency ratios. The welfare benefits from this process could be substantial with increased household savings and human capital investments, greater worker productivity, and accelerated economic growth. Provided that the decline in fertility does not lose momentum and the appropriate policy preconditions are met (e.g., economic environment, good governance, stability), Ethiopia could then capture the benefits of a demographic dividend. Over time, the fertility decline will also bring about a change in the population age structure, narrowing the base of the population pyramid. Today, the youth bulge in the population structure is a major issue affecting high unemployment among youth and frustrating their life course aspirations. Ethiopia needs to continue its ongoing fertility decline in order to make the most of the potential demographic dividend, reinforce the new law of later age of marriage, and ensure secondary and non-formal education.

When seeking to understand the causes of fertility transitions, economic motivations and rational behavior have long been the dominant explanation. Therefore, research on causal factors has been concentrated on Coale's first condition of readiness (to accept fertility control), with less emphasis on his second and third conditions of willingness and ability to do so, respectively, although they are not less important (Cleland and Wilson 1987: 9; see also Chap. 2, section "Demographic and Epidemiological Transitions"). From an economic perspective, individuals are believed to engage in a rational decision-making process to assess costs and gains of having children in order to reach a decision that will maximize their benefits. In traditional or pre-transition societies, the valuable role children play as economic actors and contributors to household income explain high fertility levels. As societies modernize, the cost of rearing children increases and its economic return decreases, therefore individuals opt to have fewer children as a rational choice, and fertility declines.

The dominance of economic explanations in social sciences, which some have called "economic imperialism", is believed to be associated to the methodology used, as economic explanations tend to produce hypotheses that can be empirically tested (Lazear 2000). When assessing economic reasons for fertility transitions, Cleland and Wilson used available evidence to argue that fundamental assumptions of economic theories are flawed and that adopting a solely economic perspective provides an incomplete account of changes in fertility and reproductive behavior (Cleland and Wilson 1987: 5). For instance, the lack of family size reduction does not automatically mean that children are seen as an economic return to their parents. Furthermore, evidence suggests that changes, such as growth or decline, and differences in levels of natural fertility and economic factors are unrelated (Cleland and Wilson 1987: 17). In effect, numerous factors contribute to the fertility transition and changes in reproductive behavior. There is no *single* explanation.

Actually, shifts in ideas, knowledge, and norms play a fundamental role in changing reproductive behavior and fertility levels. Building on the diffusion of innovations theory first proposed by Everett M. Rogers (1931–2004), Cleland and Wilson argue that the level of control individuals have over fertility in post-transition societies, which was missing in pre-transition societies, implies that the transition can also be explained by "innovation and the adoption of new ideas and forms of behavior" (Cleland and Wilson 1987: 17). Historical patterns suggest that the beginning of fertility transitions often takes place simultaneously among similar cultural groups. When researching shifts in fertility levels in rural areas of Egypt, Weeks found that when change occurred in one village, similar shifts were taking place in neighboring villages, whether fertility increased or decreased (Weeks 2001: 21–22). Similar patterns took place among groups in larger geographical regions, as was the case in Latin America or Europe. Due to significant economic diversity between groups for which transition was taking place at the same time, the spread of new ideas explains such changes better than economic reasons (Cleland and Wilson 1987: 20). Additionally, the use of contraception and decline in fertility, which tends to start in urban areas among educated sections, can spread throughout a society to rural and more deprived areas within short periods of time, suggesting important and fast social change in norms and behavior.

Numerous countries with the most significant and rapid fertility transitions do not confirm the purely economic reasoning about fertility decline. Many of these countries were in labor-intensive regions, such as Taiwan, where a large population and many children could have been seen as a valuable contribution to economic production (Cleland and Wilson 1987: 21). Although governments' interventions have enabled and accelerated the fertility transition in many of these contexts, ideational change appears to support societal change. Education has been a key element in this regard, to the extent that the timing of the transition is often strongly associated to improvements of social indicators, such as women's empowerment and literacy. Higher levels of education are linked to higher levels of contraceptive use, lower fertility levels, better child health, and higher aspirations for one's children. Because even one extra year of education is enough to see significant shifts in fertility preferences and reproductive behavior, it can be argued that new ideas,

knowledge, and aspirations are rapidly resulting in change (Cleland and Wilson 1987: 24). All these factors point to the importance of ideational change in fertility transitions, and therefore to the need for broad policy interventions to complement effective family planning programs.

In the same vein, one should also mention mass media communication, which plays a major role in social programs. Mass media communication is a tool that is used particularly to improve the outreach and effectiveness of family planning programs. It is employed as a means to promote the advantages of smaller family size, provide information about contraceptives, and encourage the use of family planning services. In societies at their early stages of fertility transition, many individuals, especially women, lack knowledge of contraceptive methods and services even when they are available. Therefore, targeting people though various communication channels that are the most likely to reach them such as radio, newspapers, and television can significantly increase their awareness. In addition to providing information, behavior change communication (BCC) campaigns can be a key method to modify perceptions, norms, and behavior. In many countries, mass media were an integral part of family planning programs and strategies to reduce fertility, including in countries where reproductive preferences and behavior were previously a taboo topic, such as Iran and Rwanda.

Studies to assess the impact of mass media on attitudes and behavior of individuals were performed in numerous fields with varied results. However, there have been many encouraging assessments, reports and evaluations of media campaigns around family planning, as many have had very positive results. In a recent assessment of successful family planning programs in sub-Saharan Africa, USAID found that providing continuous information, education, and communication (IEC) and BCC were crucial program investments (USAID 2007: 2). In their analysis of mass media in Kenya, Westoff and Rodríguez established that there was a strong statistical connection between women having heard or seen messages about family planning on the radio, in the newspaper or on television, and key measures of reproductive behavior, namely reproductive preferences and contraceptive use (Westoff and Rodriguez 1995: 31).

However, it is difficult to establish a direct causality between exposure to media messages and changes in reproductive behavior. It is possible that other variables are more influential, or that women using contraceptives are simply more exposed to media messages, without such messages actually leading them to use contraception. Still, the correlation between those exposed to messages and contraceptive use is strong (Westoff and Rodriguez 1995: 31). Among the women using a contraceptive method, 15% had not heard or seen a media message. This proportion rose to 25% among women who had heard radio messages, to 40% among those who had heard or read a message by radio or in print, and even reached 50% among the women with access to radio, print, and television messages. Even among the women who did not desire to limit their family size, having heard messages in the media was linked to an increased desire to space births (Westoff and Rodriguez 1995: 26 & 31).

Similar evidence was found in Nigeria. Television promotion of family planning in three cities (Ibadan, Enugu, and Ilorin) from 1985 to 1988 contributed to

increasing the number of new and continuing users of contraceptives. Many surveyed respondents remembered particular messages and even clinics they had seen on television (Kiragu et al. 1996: 1). There are numerous other examples of successful mass media campaigns for family planning (e.g., Brazil and Nepal), which all point to the value of using mass media communication to bring information, raise awareness, and promote behavioral change. In Brazil, fertility patterns are believed to have been heavily influenced by soap operas, which presented different social norms. For instance, 72% of the main female characters in these soap operas had no children, while about 20% of them having only one child. As the "most pervasive form of cultural communication" due to low literacy levels, soap operas in Brazil are a direct way of presenting new realities, family values, and reproductive norms to all classes in society (La Ferrara et al. 2008: 2). Research shows that the timing of the decline in fertility followed rather closely the airing of this kind of material. Furthermore, research suggests that it is both the exposure to television as well as the introduction to a different reality presented in these soap operas that contributed to new fertility choices (La Ferrara et al. 2008: 23).

In Nepal, the government has provided information and education on population issues, family size limitation, delayed age of marriage, and has improved the position of women through several media including radio, cinema, newspapers, and television. The media were an important tool to deliver information to a larger population given that education was not universal and such means of communication reached rural populations (Bhandari and Shrestha 2005: 4). Knowledge of family planning and modern contraception is extremely high in Nepal: it is 100% among married women aged 15–49, which many have attributed to mass media campaigns (Population Reference Bureau 2009a; Bhandari and Shrestha 2005: 4–5; Boulay et al. 2002: 379). Yet, despite universal knowledge, only 44% of married women aged 15–49 are using modern contraceptive methods (Population Reference Bureau 2009a). There are gender differences in exposure to certain forms of media and use of family planning. Men exposed to audio-visual media were found to shape their contraceptive behavior, whereas no specific kind of media appeared important in influencing women's contraceptive behavior (Bhandari and Shrestha 2005: 2). In the case of Nepal, direct exposure appears to have been most important for increasing knowledge of family planning, whereas indirect exposure, through discussions with other individuals, was more strongly associated with contraceptive use (Boulay et al. 2002: 379). Still, over the past 25 years in Nepal, there has been a shift toward delayed age of childbearing, and increasing as well as earlier contraceptive use among married women (WHO 2005).

Advocacy and Policy Dialogue

The advocacy and policy dialogue processes are also key steps in the conception and design of population policies. Advocacy encompasses activities by individuals and/or groups with the view of influencing policymakers about policies and,

hopefully, mobilizing adequate funding for interventions and programs. Advocacy uses public speech, media campaigns, lobbying, analytical work, and models to convince undecided and wavering leaders, policymakers, and particular constituencies. Policy dialogue implies high level discussions with key stakeholders, and may be conducted within a country, for instance by policy "champions" trying to convince leaders and policymakers. More often, however, the policy dialogue process takes place between government officials and civil society (NGOs), on the one hand, and representatives of multilateral or bilateral development agencies, on the other.

Advocacy and policy dialogue rely on data analysis, strategic planning, costing, and other methods, such as knowledge generation through operational research, policy awareness, policy influencing, and capacity building. Key steps in the process of policy development are issue framing (i.e., framing the problem) and agenda setting. Agenda setting deals with getting the "problem" on the formal policy agenda (Hardee et al. 2004a: 13–14). Issue framing addresses the question: What types of solutions are proposed? It needs to be conducted with the various stakeholders who will eventually endorse and/or support the new policy.

Activities associated with the process of issue framing and agenda setting include advocacy for the issue to be addressed through policy and how, as well as policy dialogue on what policy should include (Hardee et al. 2004a: 15–16). Advocacy activities can also aim at enlisting and educating the media, through the training of prominent and influential journalists on population and reproductive health issues. Awareness raising may also be facilitated with the use of models to present population and development issues.

Over the last three decades, the US Agency for International Development (USAID) has funded a series of projects (i.e., RAPID, OPTIONS, POLICY, Health Policy Initiative, and Health Policy Project) to enhance, among many other objectives, advocacy and policy dialogue on population and reproductive health issues with the view of changing leaders' perceptions and attitudes and eventually bringing policy changes.

Among advocacy tools, the well-known model *Resources for the Awareness of Population Impact on Development* (RAPID) prepared by the Futures Group International with funding from USAID has been used successfully around the world. The model has been criticized by some academic researchers for being too simple, but it has proved very effective when used well and with influent leaders. In fact, the RAPID model has triggered policy sea changes in many countries.

More recently, the Population Reference Bureau (PRB) in collaboration with the Gapminder Foundation, has prepared multi-media presentations using compelling data-visualization software under the ENGAGE project, standing for *Eliminating National Gaps – Advancing Global Equity*. These presentations are designed to enhance understanding of public health issues through the use of innovative communication technology aimed at targeted constituencies.

Advocacy and policy dialogue can yield important results in their own right. Quite often, pedagogic explanations of population issues may help to overcome the "demographic illiteracy" that is often widespread among leaders, government officials, policymakers, and the general public. However, policy dialogue can be

acrimonious when governments, on the one hand, and international or bilateral organizations and/or NGOs, on the other, are at odds on population issues and related policies.

The mix of arguments to be used in high level policy discussions is most important for the success of advocacy and policy dialogue activities. With respect to high fertility levels, these arguments may build on women's health considerations, human capital formation (e.g., education and health), poverty reduction, and the protection of the ecosystem. In developed countries, policies to increase sub-replacement fertility levels often use economic arguments. The search of special and rare skills is also a powerful rationale for immigration policies. Ethical considerations may be put forward to advocate for more generous policies on refugees and asylum seekers. Policy dialogue also needs to allay the fears of those who perceive immigration patterns as a threat to national identity, whatever the latter is being defined. In the case of population aging policies, public authorities can highlight solidarity between generations, as it has been done in the European Union (EU). Of course, cost-benefits arguments may also help various constituencies endorse proposed policies and interventions.

Policy dialogue can take decades to bear fruit, as it has been the case in many sub-Saharan countries (particularly in the Sahel), and where such efforts should be pursued. Often, key African leaders need to be convinced one at the time, and the same process must take place for new incoming leaders.

But policy dialogue can also bring results when the political economy of the country makes it possible for leaders to embrace major policy shifts. In some countries, the authoritarian nature of regimes in place may facilitate policy dialogue activities and/or precipitate their outcome. For example, in Myanmar (called Burma until May 1989), policy dialogue activities on population and reproductive health issues took place around 1990, with funding from UNICEF. At the time, its military government abandoned the traditional pronatalist stance and embraced a broader reproductive health agenda. Whether the policy dialogue activities *per se* triggered the new policy directions remains unclear. Despite the relative isolation of the regime, the new orientations had probably matured slowly due to the presence of several international development agencies active in the country (May 1991: 12).

Experiences in Developed Countries

Low levels of fertility, socioeconomic implications of population aging, and the fear of population decline have triggered many developed countries to raise alarm about low, and sometimes negative, rates of population growth (Zoubanov 2000: 2).

Since the 1990s, the growing concern for low fertility levels has led to new policy considerations and policy measures to address the effects of slow population growth and population aging (United Nations 2010b: 47). However, not all countries facing low fertility and population aging have implemented such policies. This is particularly the case in areas key to addressing socioeconomic conditions but that are

difficult to reform, namely social security benefits, health needs for old age, and public recognition of life-long contributions of older individuals to societies in terms of human, social, and economic capital (Zoubanov 2000: 2).

In very general terms, most policy approaches to low fertility and population aging are indirect, operating with incentives and disincentives. For instance, several countries, such as France, Sweden or Belgium, provide support at childbirth, family allowances, paid maternity/paternity leave, etc. (Caldwell et al. 2002: 14). This social support can be interpreted as a means to encourage higher fertility levels. However, Caldwell and colleagues contend that it is impossible to differentiate such social support from broader social welfare, whose objectives are often similar to population-driven support measures (Caldwell et al. 2002: 14).

Encouraging marriage, cohabitation, and more childbearing among younger couples are also commonly used approaches to raise fertility levels (Grant et al. 2004: xiii). The example of France, already mentioned, seems to indicate a positive link between pronatalist interventions (essentially through family policies) and increases in fertility levels. The experience of the Saar region might provide *au contraire* an example of an effective policy intervention. This German region (under French administration from 1945 to 1956) benefited during a decade from the French family policy, which was at the time in its most generous phase. During this period, the Saar had the highest TFR of all German regions. When the Saar returned to Germany, its fertility fell within a few years to become one of the lowest in Germany. The probable explanation is that families had lost a substantial portion of their purchasing power (since they did not benefit anymore from French financial incentives for large families) and, as a consequence, had reduced their fertility (Schwarz 1989).

Other attempts to raise fertility in developed countries have yielded modest results. For example, Sweden's family policy provides grants, in addition to significant insurance and sizeable allowances (Government Offices of Sweden 2009). Such systems can provide strong incentives to have more children, but they are not always financially sustainable; most often, they are successful only over a limited number of years. Conversely, some countries have tried to raise their fertility levels, to no avail so far. The example of Singapore, already mentioned, comes to mind. When fertility dropped under replacement level, the country shifted from anti- to pronatalism. However, its efforts to increase fertility have not yet succeeded. Moreover, the policy was not equitable since it favored educated couples.

There are ongoing discussions around policies to reverse low fertility and population aging, how to design and implement them, and to what extent they are or might be efficient. Grant and colleagues suggest that the link between government policies and population dynamics are not well understood. It remains also difficult to isolate the effects of such policies from the general socioeconomic and political setting (Grant et al. 2004: xiii). Nonetheless, these authors did find that national policies can slow down fertility declines provided they are implemented in the correct conditions. According to McDonald, "the evidence for the efficacy of such policies tends to be favorable" (McDonald 2006: 501). In fact, Grant and colleagues established that the introduction of family support packages contributed to increases

in fertility (e.g., in Poland and East Germany in the 1970s) and, conversely, that the easing of pronatalist family policies resulted in declining fertility levels (e.g., in post-communist Poland and East Germany in the 1990s) (Grant et al. 2004: xv).

Before the German reunification in 1990, there were certain differences in fertility levels between East and West Germany. During the 1980s, East Germany had steadily higher fertility levels than West Germany, to the tune of 0.4–0.5 live births per woman (Grant et al. 2004: 84). In 1976, the government of East Germany implemented pronatalist policies, with a clearly stated objective of ensuring replacement fertility in the long run (Grant et al. 2004: 91). These policies were comprehensive and included the extension of maternity leave and paid leave for working mothers with two or more children. This came in addition to basic leave, educational leave with monthly salary at the birth of the second or following child, interest-free loans for young married couples with the possibility of improving loan terms at childbirth, monthly family allowances increasing with each child, and reduced working hours for mothers and day care for young children (Grant et al. 2004: 92). In the West, the Federal Republic of Germany did not have an established population policy and was unwilling to introduce economic incentives to encourage higher fertility levels; therefore, it focused on gender equity within the family policy. Although some family policies were implemented in 1979 and 1986, at the end of the 1980s and throughout the 1990s the attention shifted to pension reform because of an aging population, a smaller labor force, costs of the social security system, and the fear of the economic challenges these trends represented (Grant et al. 2004: 94–95). Favorable family policies were therefore no longer implemented to the same extent as the two countries unified, which represented a major change for East Germany.

After the reunification, fertility declined rapidly in the former Democratic Republic of Germany. Establishing causality between fertility change and one particular policy is difficult. Asserting causality between fertility decline and the absence of family packages that had previously been in place is also challenging, especially in a context where fertility decline is also likely to reflect other major political and socioeconomic shifts resulting from the reunification, the end of communism, and the introduction of capitalist economy. Indeed, this transformation was accompanied by serious insecurity, both financially and in terms of employment prospects, which tends to affect significantly family planning decisions and reproductive behavior.

Similar trends took place in Poland where evidence suggests that population policies implemented by the government in the 1970s effectively guided fertility change into the following decade (Grant et al. 2004: 107). Generous family policies were implemented to support working mothers and families with children. These policies resulted in increasing birth rates. Birth rates peaked in 1983 and began to decrease in the second half of the 1980s, sharply from 1989 and thereafter well into the 1990s. Rapid fertility decline has partly been associated with the economic transformation from a communist government and planned economy to a liberal democracy and free market capitalism. This shift came with increasing insecurity, high unemployment, and sharply reduced social security, including family packages (Grant et al. 2004: 105–106).

In both cases, the introduction of family policies in the 1970s contributed to the increase in fertility during the 1980s, even though the absence of favorable family policies after 1989 is likely to be only one explanatory element, among major socio-economic shifts, of the fertility decline that followed (Grant et al. 2004: 97).

It should be stressed that fertility policies can be relatively imprecise and do not always bring the desired results. In East Germany, the policy designed to increase fertility provided incentives for couples to marry at a younger age and have children early, but led only to a temporary increase of the crude birth rate (Dorbritz and Fleischhacker 1999). Arguably, it is much more difficult to increase fertility levels when they are low than to decrease them when they are high. Furthermore, the fine-tuning of population policies to obtain very precise levels of fertility, for instance replacement fertility, seems virtually impossible. Couples in developed countries have opted for low fertility regimes because of changes in values and women's roles (now often more educated than their male counterparts) and economic difficulties and structural unemployment. It is hard for policy interventions to overcome these trends, particularly as measures to increase fertility require that actions be taken concomitantly in many different areas such as fiscal adjustments, family subsidies, urban planning to accommodate larger families, construction of day-care centers and social equipments, and regulations to increase the flexibility of the labor market in favor of women with young children.

Sweden is an example of a country where generous family policies were implemented on the ground of gender equity, women's participation in the workforce, and involvement of fathers in their children's upbringing. Although there were important fluctuations in fertility levels over the past few decades, it can be argued that generous family policies have enabled Sweden to maintain fertility levels above the European average (1.87 and 1.53 for the period 2005–2010, respectively), and even increase the participation of women in the workforce (United Nations 2010b; Grant et al. 2004: 119). These policies include shared, flexible, and extensive paid parental leave, as well as leave for child illness, affordable public day care, and child allowances. Family policy has been strongly linked to employment policy and gender equity, promoting equal responsibility of men and women in child rearing and as income-earners (Grant et al. 2004: 124). However, fertility has decreased with economic downturns, higher levels of unemployment, and ensuing cuts in social spending by the government. It is from this perspective that Grant and colleagues suggest that Sweden follows a fertility pattern linked to economic cycles, especially since family benefits are granted in relation the income level of parents in the year preceding childbirth. Furthermore, good economic conditions, parental leave, and quality child care are perceived as fundamental prerequisites for families to grow (Grant et al. 2004: 130).

To respond to population aging, numerous methods to discourage early retirement, extend the working period, and promote female participation in the workforce have also been implemented with the view of reducing the pressure of an aging population on social security mechanisms.

A more direct policy tack to address labor force requirements and shifting age structures has been immigration (Grant et al. 2004: xiii). In developed countries,

however, immigration policies are driven more by economic than demographic considerations. Most often, such policies are designed to respond to specific shortages of unskilled and/or skilled workers. Indeed, it is much more difficult to address the issue of replacement immigration. First, one often notes a lack of consensus on numbers of immigrants needed, because these numbers depend on the policy's goals: is it just workers that are needed or should the population be kept identical in numbers *and* structure? The decision pertaining to the age of immigrants must take into account the practical difficulties of finding immigrants of specific age groups, and the impossibility in welcoming parents without their children or children without their parents. Second, the lack of reliable and complete data concerning immigration further complicates these considerations (see Tribalat 2010 on the case of France, particularly pp. 143–182).

Still, increasing immigration has occasionally been advocated as a potential solution to depopulation (Keely 2009). However, in a study reviewing policies in relation to low fertility and population aging in Poland, Spain, Germany, France, and Sweden, Grant and colleagues did find that immigration – as a means of population replacement – cannot stem population aging and its effects. Since immigrant populations will also age, it is unclear whether replacement immigration would effectively slow down population aging (Grant et al. 2004: xiv). The number of people required to counter the effects of aging is unrealistic given the public sentiment and political setting, as most governments are in fact seeking to limit immigration, except in traditional immigration countries (Grant et al. 2004: xiv).

In any given context, immigration is accompanied with costs and problems in host countries, even if there are notable benefits. As immigrants enter the workforce in receiving countries, immigration affects wages and unemployment levels (Dobra 2009: 3). While there is no correlation between immigration and unemployment, the general argument is that when immigrants can substitute for the native population, wages are expected to decrease if they are flexible (Dobra 2009: 3). This often negatively affects the unskilled labor force. An anti-immigrant public sentiment can stem from such changes, especially among sections of the population with low education and low skill levels as they tend to view immigration less favorably than more educated and highly skilled individuals (Bauer et al. 2001: 1). The public's concerns with their socioeconomic situation as they compete with an immigrant workforce and the fear of increasing crime are some of the issues policymakers and politicians need to take into account, and this often determines how to develop policies. Furthermore, a larger immigrant population also implies higher costs for governments, due to additional demand for education, health, and other social services.

Furthermore, immigration can be challenging for host countries from a social integration perspective: ensuring that immigrants do integrate, that they learn the language of the host country, and assimilate with indigenous inhabitants are key issues influencing discussions on immigration. Yet these are difficult to address effectively. In recent years, the global economic crisis (GEC) of 2008 has led to growing racism and xenophobia in host countries, as people feel increasing financial and employment insecurity (Rogers et al. 2009: 37). Moreover, not all societies are ready to welcome numerous immigrants because these trends may challenge

directly their conception of national identity, particularly in Western Europe (Teitelbaum and Winter 1998: 11–62).

In the case of the EU, Kohnert argues that a fundamental problem with immigration to member states is that costs and benefits of migration are distributed unequally both between countries and across social classes within countries. As these characteristics of the immigration regime remain unsolved, they are likely to contribute to ongoing problems with immigration, such as illegal immigration, the risk of violence among communities, and the rise of right-wing extremism (Kohnert 2007: 19). This example suggests that numerous issues must be taken into account when addressing immigration; approaching it as a solution to population aging is rather challenging.

Similarly to policy efforts to trigger fertility decline and slow down population growth in developing countries, one universal policy solution to overturn low fertility and population aging in developed countries does not exist. A combination of different policies generally enables countries to increase fertility levels, whether they combined parental leave, allowances, access to loans, and/or tax reductions. In Sweden, the fact that policies promoted gender equity in the workforce and in relation to child care seemed to account for the change to higher fertility levels (Grant et al. 2004: xvi). This suggests that policies enhancing wide-ranging social conditions are likely to have positive effects on fertility as well, whether it is to increase or decrease fertility levels. An important issue regarding the effectiveness of public policies to tackle low fertility and population aging is that such policies take time to bear results. On the one hand, this makes such policies less attractive from a political perspective, as asserted by Grant and colleagues (Grant et al. 2004: xvii). On the other hand, one can also argue that it makes it challenging to accurately evaluate the effectiveness of these policies, especially as developed countries have only regarded low fertility and population aging as policy concerns since the late 1990s.

Modeling Policy Interventions

Both political dynamics and politics can play a fundamental role in enabling or preventing policy change. In most countries, the political environment and the support of major political actors has facilitated the implementation of programs aimed at reducing mortality and fertility levels. However, political support has been harder to muster when it comes to policies aimed at increasing fertility and/or managing immigration.

When presenting lessons learned from an overview of 23 countries and their family planning policies, Robinson and Ross demonstrate that the decision to adopt a proactive policy was essentially a political one, and in many instances it came with some opposition. Numerous factors came into play, and several had political dimensions, ranging from strong leadership to the support of political elites (Robinson and Ross 2007b: 425). Developing a policy and initiating change is a difficult political endeavor. As argued by Reich, major policy reforms, such as US President Clinton's

attempt to reform health care in 1994, have often failed due to political hurdles (Reich 1996: 2).

PolicyMaker, a research and policymaking tool, has been developed at the Harvard's School of Public Health to assist strategic thinking about policy reform. The software is meant to aid in the analysis of various political factors influencing public policy, improve the strategic management of policy making processes, and enhance the political feasibility of policy reform. The tool looks specifically at policy actors, consequences, interests, opportunities, and obstacles. It helps analyze the contents of policies, the positions held by different stakeholders, the influence of main actors, and key opportunities and challenges for policy reform. It also provides strategies for triggering policy change (Reich 1996).

Demographers have also modeled specific components of demographic change. Mortality and particularly fertility have received a lot of attention, since it has been at the core of many population policies in developing countries. The Futures Group International has developed the *Spectrum*, a policy modeling system, which among many other things enables specialists and policymakers to prepare RAPID presentations, calculate population projections, conduct cost-benefits analyses of family planning, estimate the impact of the HIV/AIDS epidemic, and compare policy interventions to reduce maternal mortality (see http://futuresgroup.com/resources/software/spectrum).

Levels of fertility are the result of many determinants: a distinction is to be made between the socioeconomic or intermediate determinants and the proximate determinants. John Bongaarts of the Population Council has established an elegant model to assess the weight of the various proximate determinants of fertility.

Focus: The Bongaarts Model of the Proximate Determinants of Fertility

Fertility levels are determined by intermediate and proximate determinants. Intermediate determinants are essentially socioeconomic in nature, such as mortality, education, employment, income, urbanization, and the status of women. They influence fertility but do not control it directly. The proximate determinants, which affect fertility levels directly, are behavioral and biological. The relationship between proximate determinants and the TFR has been modeled by Bongaarts and Potter (1983), in what is commonly called the Bongaarts model (Bongaarts 1978, 1982). The model captures in a simple formula how the inhibiting effect of the various proximate determinants of fertility decreases the natural fecundity rate (the biological maximum) estimated at 15.3 children on average. The formula is as follows:

$$\text{TFR} = Cm * Ci * Ca * Cs * Cc * Fn.$$

In this formula, *Cm* is the marriage index, *Ci* is the postpartum infecundability index (temporary infertility associated with breastfeeding and postpartum abstinence), *Ca* is the abortion index (usually induced abortion), *Cs* is the sterility index (women unable to conceive), *Cc* is the contraception index (both modern and traditional), and *Fn* is the natural fecundity. Each proximate determinant index varies between 1 (maximum value) and 0 (minimum value). If the value of an index is 1, there is no inhibiting effect of that determinant on the natural fecundity. If all C indicators are equal to 1, then the TFR will be equal to *Fn*. However, if the value of only one determinant is 0, that determinant has a complete inhibiting effect on fertility and consequently the TFR is equal to zero.

According to the model, the index of marriage, *Cm*, is based on the average age of marriage and the number of years spent in union. The index of postpartum infecundity, *Ci*, is defined as the fraction of fertile potential lost due to the contraceptive effect of breastfeeding as well as the impact of culturally motivated abstinence (e.g., postpartum abstinence). The index of abortion, *Ca*, is defined as the number of induced abortions and the fraction of a woman's reproductive potential that is lost as a result of the procedure. The index of contraception is defined as the reducing effect of contraceptive methods on reproduction, as well as the effectiveness of different forms of birth control available. An updated set of equations for the model has been developed by John Stover (1998).

The TFR can be expected to go down when the incidence of marriage decreases and levels of breastfeeding, abortion, postpartum infertility, and contraceptive use increase. The model also shows that some population policy interventions, such as family planning programs can have an important effect on the TFR. In many developing countries, particularly in sub-Saharan Africa, where age at marriage is traditionally very low, the use of contraception and recourse to abortion are low as well. In these settings, the greatest fertility-inhibiting factor is postpartum infecundability, which is linked to long periods of breastfeeding and postpartum abstinence. A study of Pakistan showed that education for women played the greatest role in influencing the marriage index (Sathar and Casterline 1998: 773). Other studies show that in Pakistan, educated women are more likely to be employed, to live in urban settings, and to marry later in life, and less likely to enter into consanguineous unions. These factors reduce the risk of pregnancy and therefore contribute to a lower TFR (Aziz 1994: 730).

Overall, the Bongaarts model is a very useful tool to design family planning programs. In particular, it enables policymakers to chart the progress of contraceptive coverage in terms of annual percentage point increases, keeping in mind other parameters that affect fertility directly. As such, the model enables demographers to make policy-driven population projections assumptions, which are more relevant to design family planning programs than normative assumptions based on the extrapolation of past trends (see Chap. 5, section "The Availability of Population Projections").

Demography looks at the size, speed of change, and age structure of populations, but it also examines the movements of people and how populations are distributed geographically. Therefore, beyond the analysis of components of the demographic change, it could be argued that the study of population is also a spatial discipline.

When developing a population policy, spatial analysis is in fact a key component needed for mapping effective interventions. However, the use of spatial analysis has been minimal in the design of demographic theories and policies (Weeks 2001: 1). Effective tools of spatial analysis have become available recently, with the development of geographic information system (GIS) technology, as well as the enhanced scope of geographical data sets. Until demographic surveys were expanded to draw regular and more comprehensive country profiles, for instance with Demographic and Health Surveys (DHS), individual household survey data underpinned studies of populations (Weeks 2001: 1). The use of GIS modeling for policy interventions has proven to have benefits for policy making as it helps decide where interventions are likely to be most effective (Weeks 2001: 22). For instance, spatial analysis has been very useful in epidemiology, as a means of mapping the spread of disease and areas with high incidence levels. It has therefore been an important tool for drawing the most efficient health interventions.

In demographic research in Egypt, Weeks (2001) used GIS modeling to test various assumptions underlying fertility change between rural villages over time.

The methodology used satellite imaging to show how fertility change in one village was linked to change in a neighboring village, whether it increased or declined. The GIS technology helped chart the spatial diffusion of change in fertility behavior (Weeks 2001: 19). GIS technology has also been used for analyzing and planning reproductive health and family planning programs, as was done in the Pattani Province of Thailand. Immediate objectives were to map the location of households of pregnant women using the services provided. This information was then used for longer term goals of developing plans for reproductive health, family planning, HIV/AIDS, and adolescents' needs (Leewannapasai et al. 2001).

Conclusion

Policymakers and public authorities need to address the key issue of the effectiveness of policy interventions and policy levers. The last decades have seen notable progress in effectiveness' measurement. First, more data have become available on population trends and programs. Second, the methodology of programs' evaluation has considerably improved as well. Third, many more technical and financial resources have been invested in M&E.

Despite the success of the contraceptive revolution that has spread all over the world but at a slower pace in the LDCs (Bangladesh notwithstanding), a closer look at the impact of family planning programs demonstrates that they operate in synergy with other socioeconomic changes.

The main engines of socioeconomic development, i.e., education, urbanization, and women's empowerment, appear to be fundamental prerequisites for demographic transitions, and particularly fertility transitions. The case of Ethiopia illustrates the synergy between auto-regulatory responses to population pressure, the provision of family planning services, and ideational and gender changes.

The advocacy and policy dialogue that have been successful in many situations must be continued. Sub-Saharan Africa, in particular, still needs major policy dialogue efforts because some African leaders remain unconvinced about the need to address the issue of rapid population growth.

It is more difficult to assess the effectiveness of policies in developed countries. Efforts to increase very low levels of fertility have generally given disappointing results. Policies to mitigate population aging are still in their infancy and attempts to regulate migratory trends must contend with volatile economic conjunctures.

Finally, much more work is needed in the area of policy modeling. Robust models like the Bongaarts' equations and indices highlighting the role of the proximate determinants of fertility are particularly useful for policies aimed at reducing high fertility levels. Nevertheless, models are still required to identify policies and socioeconomic regulations needed to address issues of sub-replacement fertility, population aging, and immigration in developed countries.

The book's concluding chapter will attempt to define the way forward for population policies around the world.

Chapter 9
Future Prospects for Population Policies

The past is fixed once and for all, but the future, on the whole, is free, fluid.

René Thom (1923–2002)
French mathematician

This chapter will attempt to chart the way forward for population policies. For various reasons, it is a daunting task.

First, the world today is demographically more fragmented than ever. While the world population continues to grow (the seventh billion human was born in 2011), this overall growth masks wide variations. Many developed countries, which are threatened by population aging and eventually depopulation, must address issues of sub-replacement fertility and immigration. Developing countries, whose populations continue to grow because of high fertility and/or population momentum, need to complete their demographic transition while pursuing socioeconomic development. Finally, the least developed countries (LDCs), whose populations are still growing very rapidly, must complete the last stage of their demographic transition, i.e., the fertility decline. Sub-Saharan Africa, in particular, needs to accelerate its demographic transition and reduce its very high levels of fertility.

Second, recent decades have seen new developments and renewed concerns in the area of population and development. The recent debate about the global climate change has given new credence to linkages between rapid population growth and the environment. At long last, issues of poverty and inequity have gained preeminence in the international development agenda. Rapid population growth (in some parts of the world) and the youth bulge have given a new impetus to worries about "demography security".

Third, new priority groups have been identified as well. First and foremost, women are now regarded as key actors for development and, as such, given priority in strategies and programs. In addition, three other specific groups have become more visible in recent decades, namely adolescents, given their demographic weight,

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0_9, © Springer Science+Business Media B.V. 2012

older people, especially in rapidly aging countries, and international migrants, although the latter group still deserves much more attention.

Finally, new bioethical issues have also emerged as modern biotechnology has interfered increasingly with matters of human reproduction. Increases in human longevity have also triggered thorny dilemmas, as illustrated by the debate around euthanasia. Some consequences of these evolutions, in particular the selection of sex before or after birth, challenge traditional population and family policies.

All these elements call for a redefinition of the role and content of population policies. In particular, future population policies will need to sharpen their implementation mechanisms and to increase their effectiveness. This will require the collection of additional data, as well as renewed efforts in research and policy modeling.

This chapter first addresses the contemporary demographic landscape, with an emphasis on the LDCs. Thereafter, it presents the new issues and concerns that are emerging or reemerging, i.e., issues of climate change (and environment), poverty, inequity, and security. The next section examines the priority constituencies, i.e., women, adolescents, old people, and migrants. Then, the chapter turns to the challenge of urbanization, which will require specific policy responses. The chapter also addresses the new bioethical and gender issues, as they pertain to fertility, sex selection, and increases in life expectancy; this is illustrated with a discussion of the phenomenon of "missing" girls in Asia. Finally, the chapter concludes with an attempt to redefine population policies, with the example of Bangladesh.

The New Demographic Landscape

Today, demographic patterns and trends range from very high fertility to sub-replacement fertility situations, from very young populations to aging ones, and from immigration-open to immigration-adverse societies. This is essentially the result of the demographic transition process that has reached all corners of the globe, although it has done so at different times and different paces. However, to a large extent, it is also a result of the various population policies that have been implemented, or not.

A comparison of Germany and Ethiopia provides a stunning example of the current global demographic divide (see Table 9.1). On the one hand, persistently low fertility rates in many developed countries jeopardize the health and financial security of their elderly, as illustrated by the case of Germany. On the other, less developed countries and the LDCs continue to experience rapid population growth, which exacerbate poverty and threaten the environment, as shown by the example of Ethiopia (Kent and Haub 2005). Although roughly similar with respect to their population size, Germany and Ethiopia have very different demographic regimes. More significantly still, the demographic outlook of the two countries will continue to diverge over the next decades. Germany will likely see its total population shrink by about 10m during the next 40 years, while Ethiopia's population will more than

Table 9.1 Key demographic indicators for Germany and Ethiopia, 2010 and projected for 2050

	Germany	Ethiopia
Population, mid-2010	82m	85m
Population 2050 (projected)	72m	174m
Percent of population below age 15, mid-2010	14%	44%
Percent of population aged 65+ , mid-2010	20%	3%
Elderly support ratio[a], 2010	3	17
Elderly support ratio, 2050	2	11
Total fertility rate, 2010	1.3	5.4
Annual births, 2010	650,000	3.3m
Annual deaths, 2010	840,000	1m
Life expectancy at birth, 2010	80 years	55 years
Infant mortality rate, 2010	3.5‰	77‰
Annual infant deaths, 2010	2,250	250,000

Source: Population Reference Bureau (2010a)

[a]The elderly support ratio is the number of working-age people aged 15–64, divided by the number of persons 65+, indicating levels of potential societal support available for the elderly

double over the same period, increasing from 85m to 174m. Age structures of the two countries are also strikingly different. Germany has three times less young people (i.e., below age 15) than Ethiopia. By 2050, Germany's elderly support ratio will drop to two persons for every German aged 65+. Conversely, Ethiopia has a huge "youth burden" since almost half of its 2010 population is below age 15.

Other demographic indicators continue to highlight the different stages of demographic transition that Germany and Ethiopia have reached. Ethiopia still has high fertility, at above five children per woman on average, which fuels its rapid population growth. Germany's fertility, on the contrary, no longer ensures the replacement of generations, which will lead to depopulation. There are more deaths than births in Germany, leaving immigration as the only possibility to counterbalance negative population growth. Finally, mortality conditions in Ethiopia are likely to improve: the gap in life expectancy at birth between the two countries is a whopping 25 years and there are more than 100 times more infant deaths in Ethiopia than in Germany.

The global demographic divide does challenge the convergence theory of demographic trends across the globe, which had been proposed by some demographers in the second half of the twentieth century. They based their analysis on the convergence that was observed over the past 50 years in health, wealth, and fertility and mortality trends, probably due to widespread economic and social development.

In fact, two major demographic trends have been observed in most recent decades. The first is the still ongoing decline of mortality, which may increase the natural rate of demographic growth, since more people survive. Nevertheless, mortality conditions have started to diverge, as some developed countries have experienced a worsening of their life expectancy at birth. The example of Russia comes to mind, where alcoholism, disease, and accidents explain past increases of adult mortality rates. The second trend is the slower than anticipated decline in fertility, particularly in the LDCs, but also in many other developing countries (Bremner et al. 2010: 2–3).

Some countries, like Kenya, have also experienced stalling fertility transitions (Bongaarts 2006: 3). Indeed, fertility decline had been considerably uneven across the world, because fertility could "have been less consistently linked to development than have other variables" (Dorius 2008: 534).

Past high levels of fertility and young age structures also contribute to population momentum, which accelerates demographic growth. The significant population growth that will happen in countries with high fertility levels will necessitate enormous investments in order to build the human capital, develop the economy, and create jobs for the youth. In this respect, some comparisons are sobering. Pakistan, for instance, which has the sixth largest population in the world, has more children under age 15 than has the US, which has the third largest population in the world (Population Reference Bureau 2010a). By 2050, typical Western African countries situated in the Sahel will have populations comparable to populations of current mid-size European countries, such as Spain or Poland. With large Sahelian populations living on fragile ecosystems, one can only expect the advent of repetitive food crises as well as massive migratory movements, not to mention the possibility of political instability. Moreover, some countries, like Haiti, might experience a collapse caused by a combination of rapid population growth and fragile environmental conditions (see Chap. 6, *Focus: Haiti's Ecological Disaster*).

By contrast, countries that have completed their demographic transition have sometimes reached very low levels of fertility. Countries like Germany, Japan, Russia, and South Korea face depopulation on a large scale, which is sometimes aggravated by negative population momentum triggered by past decades of low fertility. Japan, for instance, is projected to lose 32.2m people between 2010 and 2050, which is more than one-quarter of its current population (Population Reference Bureau 2010a). This situation is exacerbated by the fact that for historical reasons Japan is particularly adverse to immigration. Inevitably, very low fertility countries will experience shrinking labor forces and severe population aging. In turn, the shrinking pool of the working-age population portends major difficulties to meet pension requirements and long-term health-care programs for the elderly. This situation is experienced in the US, where the sustainability of the Social Security is in question despite a fertility rate close to replacement level, a level that many European countries would envy. Immigration trends will also change because immigrants will be needed to replenish depleted labor forces. Illegal immigrants might also settle in territories that are too vast to be managed by dwindling native populations (e.g., Siberia). Population policies in very low fertility countries will need to tackle three types of issues, namely below-replacement fertility, population aging, and immigration. Unfortunately, these are three specific areas in which effective policies are hard to come by. Moreover, proposed measures might not be readily acceptable to indigenous populations, particularly with respect to immigration policies.

Among the less developed countries, LDCs warrant a closer look. This group currently encompasses 49 states. Sub-Saharan Africa (SSA) has 33 LDCs (none of them are in Southern Africa, except Lesotho) and the Western Hemisphere has only one LDC, i.e., Haiti, in the Caribbean. Ten other LDCs are scattered across

Asia (nine are situated in South Asia, either in South Central or in Southeast Asia), and five are located in Oceania (these are island-countries). It is worth mentioning that only three of the 18 big countries are listed among the LDCs, i.e., Bangladesh, the Democratic Republic of Congo, and Ethiopia. Uganda and Tanzania, which could potentially become big countries by 2050, also belong to the LDCs.

This grouping of LDCs is not static. In 2007, Cape Verde graduated out of the list, thanks to its strong development performances. It could be argued that Equatorial Guinea could graduate as well, due to its oil revenues. Zimbabwe and Côte d'Ivoire should possibly go back to the group of LDCs because of their catastrophic socio-economic situations, which has been aggravated by long-term political instability. The new country of South Sudan will also belong to the LDCs.

As an aggregate group, the LDCs totaled 857m individuals in mid-2010. Globally, they have an annual rate of natural increase of 2.3% and a total fertility rate of 4.5 children per woman. The LDCs' population is growing fast and is expected to reach 1.7bn in 2050[1] (Population Reference Bureau 2010a). Within the LDCs, the 33 SSA countries stand out. Overall, SSA has a rate of natural population increase of 2.5% per year and a total fertility rate of 5.2 children per woman. These 33 countries have a global population of 534m individuals (i.e., 62% of the population of all LDCs), but are expected to grow faster than the remaining LDCs and reach 1.2bn people by 2050. Sub-Saharan African LDCs will then represent 71% of the population of the 49 LDCs.

In the 1960s, the LDCs were confronted with the same demographic problems as developing countries, namely a rapid population growth of about 2.5% per year, leading to a population doubling time of only 28 years. However, at that time developing countries in Latin America, the Caribbean, and Asia, adopted strong population policies. As a result, most of these countries were able to reduce their high fertility levels and rates of population growth. The group of young children (under age 5), increased by 50% but was stabilized within 30 years, whilst the group of school-age children (5–14), doubled but was also stabilized within 35 years. This enabled many developing countries to proceed with important human capital investments, which helped improve their development prospects. They should eventually reach most of the Millennium Development Goals (MDGs) (United Nations 2009a).

Nothing of this nature, or at least to the same extent, happened in the LDCs. Bangladesh is the main exception, where the population of about 150m or 155m in mid-2010 accounts for about half of the population of the non-sub-Saharan African LDCs (see later in this chapter, *Focus: Bangladesh's Fertility Transition in a Poor Setting*). Sub-Saharan Africa, in particular, has not yet experienced a rapid decline of its high fertility levels and still has weak family planning programs (Jacobstein et al. 2009), although change could be coming (Sharan et al. 2011: 445).

[1] To a large extent, the future stabilization of the world population will depend on the rapid demographic growth in the LDCs, as well as the depopulation that many developed and developing countries are likely to experience.

The population growth rate in SSA has remained at about 2.5% per year over the past half century, except in Southern Africa. In SSA, age groups 0–4 and 5–14 were multiplied by a factor of 3.5 and almost four, respectively. As can be expected, the 33 sub-Saharan African LDCs were not able to muster the resources needed for their human capital investments (e.g., education and health), which explains the widespread and pervasive levels of poverty in this part of the world (United Nations 2009a). These countries will also experience severe food shortages (Torrey 2010: 192–196).

By contrast to successful population programs implemented in Asia, Latin America, and the Caribbean, benign neglect from African leaders and elites translated into late, weak, and ineffective programs (May and Guengant 2008). In part because of initial successes of developing countries' programs, international attention has shifted to other urgent issues, such as the HIV/AIDS epidemic, humanitarian crises caused by natural disasters, and good governance. Recent concerns about climate change have further pushed aside concerns about the demographic dimensions of African development.

Yet, unless the transition toward lower levels of fertility starts in earnest in sub-Saharan Africa, and particularly in Central and Western Africa (Guengant 2011: 32–33), rapid population growth will jeopardize Africa's development efforts and its prospects for full integration into the world economy (All Party Parliamentary Group on Population, Development and Reproductive Health 2007; Cleland et al. 2011: 141; Ndulu et al. 2007: 106–116). The large number of young Africans – two out of three people are under 25 – and persistent high levels of fertility imply that population growth will continue despite the HIV/AIDS epidemic. In mid-2010, sub-Saharan Africa had 865m people – 12.5% of the world's population. According to the United Nations 2008 population projections, this share will increase to 19.3% in 2050, or 1.8bn people, assuming that African women would then have 2.5 children on average, against 5.2 today. Indeed, these projections imply rapid declines in fertility levels that are far from guaranteed, except again in Southern Africa. Higher 2050 population figures, potentially reaching two billion or more, are quite plausible should fertility decline more slowly.

Renewed Concerns: Climate Change, Poverty, Inequity, and Security

When addressing future population policies, a major consideration must be the current international policy environment, as well as the priorities put forward to achieve sustainable development.

Some important issues, like the HIV/AIDS epidemic, have overshadowed population and family planning problems in the past (Speidel et al. 2009b: 3049). Indeed, HIV/AIDS offers a good example of a cause defended aggressively by its policy community, i.e., networks of individuals and organizations concerned with the problem. Their understanding and portrayal of the importance of the issue helped

muster nearly half[2] of international donors' resources devoted to health, as compared to the 5% mortality and morbidity burden of HIV/AIDS in low and middle-income countries (Shiffman 2009: 608–609; Shiffman et al. 2009: S45).

On the forefront of international policy discussions today there is a renewed emphasis on certain key issues. These include climate change and the environment, poverty alleviation, inequity reduction, and security. Each of these concerns is of great consequence for sustainable development, and each area is considerably influenced by population dynamics, albeit the linkages between population trends and these issues may not be immediately apparent. It is also unclear how much leverage population policies will have in addressing these specific issues during the next decades.

The environment, along with climate change, has emerged as an international policy concern.[3] It is generally acknowledged that industrial production that supplies human consumption has resulted in emissions of greenhouse gases, and that this has contributed to the warming of the planet. It is estimated that 80% of carbon dioxide emissions result from industrial activities, the rest coming from increased land use (Stephenson et al. 2010: 150). According to the International Panel on Climate Change (IPCC), temperatures and sea levels are expected to rise, possibly by 1.1–6.4°C and 28–79 cm, respectively, by year 2100. The climate is increasingly volatile, with extreme weather patterns, floods, and droughts becoming more common and harsher. This is especially worrying in developing countries, where populations are more vulnerable and countries less able to adapt to climate change (Stephenson et al. 2010: 150).

Certain demographic characteristics of developing countries and particularly the LDCs often intensify the vulnerability of populations to the effects of climate change. In poor countries, where population is growing rapidly and where a large proportion of the population still depends on agriculture for subsistence, an increasing number of people are exposed to unpredictable rainfall, floods, or droughts (e.g., the dramatic floods in Pakistan in 2010). Many countries also face the issue of scarcity of cultivable land. This has lead to increasing levels of poverty, malnutrition, famine, and loss of livelihood, particularly in places like the Sahel (Kandji et al. 2006: 11–12 & 14). Many governments, for example in sub-Saharan Africa, often lack expertise and capital for adaptation, which is necessary to minimize negative effects of natural disasters and climate change (African Development Bank 2008: 7).

An analysis of the National Adaptation Programmes of Action (NAPA), developed under the auspices of the United Nations Framework Convention on Climate

[2] However, accounting procedures may inflate this figure.

[3] The 2009 United Nations Climate Change Conference in Copenhagen, Denmark, failed to reach an agreement on climate change. A key question revolved around the relative responsibilities of countries for limiting the emissions of greenhouse gas and for funding the shift to low-carbon energy and alternative technologies. However, the 2010 UN Climate Change Conference in Cancun, Mexico, obtained more promising results, particularly with respect to cutting carbon emissions.

Change (UNFCCC) by the LDCs and Small Island States, found that among 41 completed NAPAs, 37 mentioned rapid population growth as a factor exacerbating effects of climate change (Mutunga and Hardee 2009), with links to food insecurity, natural resource depletion/degradation, water resource scarcity, poor human health, and migration and urbanization (Bryant et al. 2009). Although 85% of countries that wrote NAPAs cited population pressure as an issue exacerbating the effects of climate change, only six suggested that addressing population should be part of the country's adaptation strategy; two proposed projects included family planning/reproductive health, but no projects were funded.

Environmental degradation is already a major problem in many developing countries, with considerable effects on agricultural production, economic growth, and the livelihood of the poor (African Development Bank 2008: 5). In many developing countries, deforestation is extensive, soil erosion contributes to desertification, ecosystems are compromised, destruction of habitat leads to losses of species, and coastal defenses are threatened. In low lying states such as Bangladesh and the Pacific Small Island Developing States (PSIDS[4]), rising sea levels (increasing the salinity of soils) and extreme weather events (e.g., tornadoes and storms) have devastating effects, to the point of being considered threats to security (Agrawala et al. 2003: 13; Pacific Small Island Developing States 2009: 1).

In countries where population density is high and weather conditions are volatile, environmental degradation is serious and the damage of extreme weather events can be catastrophic. In the Philippines, population pressures due to the high density of 313 people per sq. km have led to considerable degradation and deforestation (Population Reference Bureau 2010d). Human activities have required the clearing of forests as well as more acute use of land. Not only is such degradation environmentally damaging (often irreversibly), but it also has consequences for the population. Agricultural productivity is diminishing, availability of food and water is less predictable, and sustainability is compromised. Furthermore, rapidly growing population and higher population density, when combined with environmental deterioration, do exacerbate the effects of natural disasters. In Asia, natural disasters such as floods are not uncommon, and climate change is likely to make such occurrences even more frequent and extreme (Population Reference Bureau 2006).

In addition to environment and climate change, poverty alleviation is at the top of the international development agenda. It could be argued that the "public concern" with development is specifically attached to the progress of those who are more disadvantaged than others and are constrained to live in deprivation (Anand and Sen 1997: 2). Poverty is a fundamental issue and it embodies much more than income and material necessities for well-being (Anand and Sen 1997: 5). In fact, poverty shapes limitations, opportunities, and therefore prospects of human development, at individual and societal levels alike. Access to education, health, and capital are some of the key resources for advancement that are often out of reach for

[4] The PSIDS include the island nations of Federated States of Micronesia, Fiji, Marshall Islands, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

the less privileged. Therefore, significant focus on providing access to services and supporting income-generating activities are priorities to reduce both the level and depth of poverty.

Since 1990, with the launch of the annual *Human Development Report,* there have been increasing efforts to truly understand, accurately quantify, and adequately address poverty, which is seen by many as the "worst form of human deprivation" (Anand and Sen 1997: 2 & 4). With the recent global economic crisis (GEC) in 2008, there has been increasing concern for poor populations because the GEC is believed to have aggravated existing conditions affecting poverty (UNDP 2010a). The United Nations' *Millennium Development Goals Report 2010* reveals that in 2009, the crisis pushed an estimated 50m people into extreme poverty, a figure which was expected to rise to 64m by the end of 2010 (United Nations 2010a: 7).

In Uzbekistan, for example, the lack of employment opportunities in rural areas is likely to lead to high levels of unplanned urbanization. In search of employment, young Uzbeks increasingly migrate to urban areas for temporary work in the informal sector, leading to intense pressure on housing, water facilities, and basic services. Rapid urbanization combined with informal employment is expected to cause the spread of urban poverty in coming years (UNDP 2010d: 8–9). In the Philippines, the slower rate of economic growth and income growth implied that the GEC pushed over two million people into poverty in a mid-2010 total population of 94m (Urquico 2010: 1; Population Reference Bureau 2010a). Notably, neither Uzbekistan nor the Philippines experienced recession on the economic front, yet they have been severely affected by the GEC, and effects on human well-being are likely to mark the next few years (UNDP 2010d: 8; Urquico 2010: 1).

Although the GEC generated higher levels of poverty, population dynamics exacerbated these outcomes. In Uzbekistan, the population structure, with a large portion of young adults entering the workforce, resulted in shortages of employment in relation to the labor supply, especially as the economic crisis hit. In many sub-Saharan African countries, a similar, yet more extensive saturation of the labor market (most jobs are in the informal sector) is noticeable as countries tend to have very young populations and a much lower level of economic development. Furthermore, intense rural-urban migrations imply that the spatial distribution is changing rapidly as well. As more people reside in urban areas, population pressure on resources and services, such as land and water supply, also increases.

The consequences of such population changes are often lower quantity and quality of services. Moreover, evidence from past decades reveals that rapid population growth tends to be associated with high levels of poverty (UNFPA 2009b). There is also a growing body of research that shows that high fertility diminishes the ability of the poor to escape poverty and may reduce their relative welfare as well (Birdsall 2001: 413).

Large households and rapidly growing populations often translate into fewer resources per individual, whether it is education or nutrition, and girls and women generally suffer the most. The relation between high fertility and low income at country level is matched by a comparable link between larger household size and poverty (Merrick 2001: 202). Research suggests that in larger households children

perform less well in school, families have poorer health and lower survival prospects, and physical development is hindered (Merrick 2001: 203). The inability of parents to control fertility decreases investments in education, and children can therefore inherit the "costs" of their parents' high fertility (Merrick 2001: 201 & 204). Furthermore, young populations and high dependency ratios, which often accompany rapid population growth, pull more resources away from investments in human capital and income-generating activities, and often restrain women from fully entering the workforce.

A major characteristic of poverty is that it is an absolute as well as relative concept. Poverty can be understood in relation to other members of the same household, to a community, a country, a region, or globally. This links poverty quite intimately to inequality. Increasingly, a noteworthy development objective is inclusive development, through which reducing inequality goes hand-in-hand with economic and human development (UNDP 2010a). Inequality implies that a part of the world's citizens are simply excluded from progress, often lacking access to basic health care and education, and suffering unequal access to socioeconomic development opportunities.

Global inequality is a relatively recent topic as research in this area only began in the 1980s (Milanovic 2006: 1). Yet inequality and inequity are more entrenched than most would expect. Today, "the richest ten percent of people in the world own 85 percent of all assets, while the poorest ten percent only own one percent" (UNDP 2010a). In fact, in 80% of the time, where we are born defines the variability of income we receive, and luck or efforts are likely to account for less than one-fifth of income variability. Circumstances at birth still determine opportunities and prospects, from the level of education of parents to one's gender, ethnicity, disability, and social class (Milanovic 2009: 2).

In Japan, Sweden or Norway, newborns can expect to live more than 80 years. However, life expectancy decreases with poor levels of development, and newborns in middle-income countries such as Brazil and India can expect to live approximately 72 and 63 years, respectively, i.e., 10–20 years less than their Japanese or Swedish counterparts. The picture is bleaker in numerous countries in sub-Saharan Africa, where poverty is widespread, and life expectancy is often lower than 50 years for both sexes combined. The reality is that, even within low-income countries, those who are better off are able to thrive and the worse off are not. Recently, health inequity has been advanced as an unacceptable inequality that can and must be addressed. The World Health Organization published a report on this issue in 2010 and highlighted that a new global agenda is necessary, as "social injustice is killing people on a grand scale" (WHO 2010: 26).

Certain population dynamics, such as rapid growth, high dependency ratios, and large households are all connected to high levels of poverty. Similarly, these population dynamics are correlated with lower life expectancy, poor health outcomes, and high numbers of disability-adjusted life years (DALYs), as well as high levels of mortality, linking population dynamics to inequity. Such population dynamics tend to feed into existing inequities, which can make poverty difficult to escape and can even deepen it. A means of tackling health inequity is to enhance circumstances at

birth and conditions in which people live (WHO 2010: 26). Lower fertility rates are an integral part of these efforts, as they imply that more resources may become available to invest in nutrition, health, and education at household level, especially for girls. At national level, they mean that there is less pressure on basic services. Therefore, more productive investments can be made in these services, as well as in economy and infrastructure.

However, when poverty deepens and inequity grows, social unrest and dissatisfaction can fuel instability and even conflict. Inequity and perceptions of inequity between groups with regard to access to social, economic, or political resources are often an underlying cause of violence (Stewart 2005: 2). In fact, in many recent conflicts, inequity has been an important element explaining the onset of violent outbreaks. Countries such as Guatemala, Mozambique, and Sri Lanka are just three examples of countries where inequities were a source of major civil unrest (Stewart 2005: 2). This is not to say that inequity alone causes instability, as conflicts are complex, multidimensional, and transformative social events. Additionally, they are particular to a specific moment in time and place,[5] and consequently cannot be accurately simplified. Still, inequality can play a role in the onset of conflict, and security has ascended as a fundamental development concern since the 1990s. Governments are increasingly seeking to prevent conflict globally, and therefore address its causes (Duffield 2005: 2–3). Since the end of the Cold War, development has increasingly been linked to human security[6] and to international security. The importance of security has been further advanced on the aid agenda since the 9/11 attacks and the so-called "war on terror". An underlying idea is that lack of human security due to poverty, environmental degradation, HIV/AIDS, or inequity among other welfare elements, can lead to grievances and conflict. Social tensions and violent conflict then threaten state stability, which in turn may jeopardize regional and international security (Duffield 2005: 3). It is this perspective that has encouraged governments in developed countries and international organizations to promote development as a way to prevent conflict.

Since the 1990s, violent outbreaks and armed conflict have primarily occurred in developing countries with low human development indicators, fragile economic performance, and important inequalities. During the 1990s, it was advanced that poor countries are more likely to degenerate into conflict than rich ones (Duffield 2005: 9). Population trends and dynamics in these countries have been influential and have exacerbated numerous social, economic, and environmental concerns, many of which contribute to instability. A young age structure, rapid growth, and

[5] For more information on the causes and characteristics of civil war and violence in developing countries, see Cramer (2006).

[6] The concept of human security, i.e., being able to live full and safe lives, emerged in the early 1990s and has been refined since. The focus after the Cold War shifted to the wellbeing of individuals in fragile and developing states, therefore making wellbeing an international concern, and not just that of the states (for more information, see Duffield 2005).

high density are some of the population dynamics that tend to intensify poor conditions for development.

A young population in a low-income country often implies high dependency ratios and saturated labor markets with soaring un- and under-employment, and can generate frustrated youths. According to Collier and colleagues, the "youth bulge" is especially challenging in countries with a deteriorating economy that is dependent on primary commodities, with low incomes and unequal wealth distribution (Collier et al. 2003: 4[7]). Having a high proportion of discontented youths with extensive grievances and few alternatives, especially in an unequal society, could motivate violence and insurgency (Collier et al. 2003: 4). In Sierra Leone, and arguably places like Sudan, Somalia, or Liberia, the number of unemployed young men, their frustrations, and the general social crises were manipulated to justify violent conflict, and facilitated the recruitment of rebels (Keen 2002: 5–6). This suggests that young populations could function as a stressor of grievances and potentially conflict under some circumstances (Sciubba 2010: 17–38).

Additionally, rapid population growth and resulting pressures on health and education, infrastructure, government expenditure, natural resources, and land can also stress grievances. In fact, high risk for conflict is found to be connected to certain demographic and environmental factors, one of which is high population density (Bodea and Elbadawi 2007: 3). Despite vast amounts of land per capita historically, rapidly growing populations and densities in sub-Saharan Africa have developed hand-in-hand with increasing land inequalities over the past 50 years (Sekeris 2010: 1). The growing inequality of land distribution combined with acute population pressure have led some to assert that such demographic growth is the foundation of major conflicts such as the Rwanda genocide in 1994 and the ongoing Darfur emergency (Sekeris 2010: 1), although other factors (e.g., political) have certainly contributed as well. Sekeris argues that, in the context of sub-Saharan Africa, "increases in population levels are likely to stimulate conflict" as demographic pressure implies a disruption of traditional land tenure toward more market-based individualized titles. This has seriously increased inequalities and is likely to continue in the future (Sekeris 2010: 3).

The relationship between demographic stress, land, and inequality leading to violence is often highlighted with the case of Rwanda. André and Platteau conducted research over the 5 years preceding the 1994 genocide. Their study reveals that the increasing population growth and density in Rwanda (one of the highest in Africa), as well as increasing commercialization of agriculture amplified existing land pressures, while indigenous land-systems were growing more individualized (André and Platteau 1998: 1–2). These changes aggravated inequalities in access and distribution of land. Age of marriage increased as it became more difficult to

[7] In sub-Saharan Africa in particular, an already difficult situation might worsen because of rising food prices. In addition, recent "grabs" of large swaths of African land by countries from other continents (e.g., Asia), which want to produce food outside their territory but for their *own* consumption, may jeopardize future agricultural prospects in sub-Saharan Africa.

ensure inheritance of land. In addition, land per capita decreased, and so did opportunities to rent land. There were also few options for migration because the economy was growing slowly. All these factors implied poor prospects for rural youth and increasing social tensions (André and Platteau 1998: 12–13). Grave land scarcity and difficult conditions for basic subsistence heightened hostility and contributed to the eruption of violence (André and Platteau 1998: 37). According to these authors, much of the violence initially emerged in areas in the North of the country where they conducted their research and also where land pressure was the most severe (André and Platteau 1998: 37–38). However, a more nuanced view of what happened in Rwanda in 1994 brings political struggle and external economic shocks as additional explanatory factors (see Chap. 2, *Focus: Demographic Hotspots and "*Cold Spots*"*).

Addressing population issues can be a means of reducing stress on states and resources, which could reduce certain grievances. In fact, population issues are related to all concerns highlighted in this section. Therefore, making these links is crucial, as addressing population can seriously contribute to making progress on each one, whereas neglecting population will weaken the effectiveness of efforts to address environmental degradation, poverty, inequality, and security.

Priority Groups: Women, Adolescents, Old People, and Migrants

Specific groups are often targeted and even prioritized in development in order to implement comprehensive and effective policies, as well as improve equity. This is because these groups are often significant in size and acknowledged to be essential for future socioeconomic development. However, sometimes it is also because they are marginalized and minority groups, which are subject to discrimination. Priority groups identified in recent years include women, adolescents, old people, and migrants. These groups, which are key social groups and contributors to development in the long run, have different characteristics. They are the focus of policies for different reasons, yet a an element common to all of them is that either they did not equally benefit from socioeconomic progress or were left out of mainstream development policies.

Among all the priority groups listed, the strongest focus was put on women, including closing the gender gap, ensuring female empowerment, and more specifically focusing on the fundamental role of women as agents of development. Women play an immense role in the functioning of societies and carry the majority of the workload in many developing countries. Yet they remain discriminated against, with fewer opportunities and rights. Too often, the most pervasive forms of discrimination, which prevent gender equity and women from living long, healthy, and fulfilling lives, are gender-based violence, harmful traditional practices (such as honor killings, female genital mutilation, and child marriage), and unequal economic opportunities and reproductive health outcomes (UNFPA 2010a).

After a series of conferences on women in Mexico (1975), Copenhagen (1980), Nairobi (1985), a "Platform for Action" was drafted at the Beijing Conference in 1995. It acknowledged that women play a critical role in development while consistently facing unequal and unfavorable conditions (United Nations 2010a). Twelve objectives set out in the "Platform for Action" included among others addressing high poverty levels endured by women, improving women's health and education, preventing violence against women, empowering women in decision-making, and ensuring that necessary institutional mechanisms are in place for the advancement of women (United Nations 1995a: 6). Undoubtedly progress has been made, as girls are increasingly gaining access to education, maternal mortality is decreasing in many parts of the world, women have increasingly been integrated in national HIV/AIDS policies, and more women are represented politically, as well as participating in the workforce (UNDP 2010c: 1–2).

Still, 15 years later, women remain disadvantaged even in areas where progress had been made initially. Disparities in education are "gendered" in many regions such as Western Asia, access to reproductive health is limited for many women causing preventable illness and death due to pregnancy and maternity, and as women join the workforce, they often have to accept vulnerable or unpaid family jobs. In fact, over 80% of jobs for women in South Asia and sub-Saharan Africa are of this nature (UNDP 2010c: 1–2). Numerous additional matters have been brought to the attention of the United Nations Commission on the Status of Women, including the deteriorating situation of Palestinian women specifically in occupied zones, the greater vulnerability of girls and women to HIV/AIDS, the abuse of women during armed conflict (such as the atrocious levels of rape of women and children by armed men in the Democratic Republic of Congo), and the ongoing practice of female genital mutilation (United Nations Commission on the Status of Women 2010: 6, 13, 25 & 32; see also Chap. 6, *Focus: The Scourge of Excision*).

An important policy response has been to mainstream gender in all strategies and policy-making, which has been successfully achieved at international level. However, many argue that mainstreaming considerations about women in policy has not been entirely successful in addressing gender inequity and other key issues related to the situation of women. In short, a lot remains to be done (Porter and Sweetman 2005: 9; Moser and Moser 2005: 11).

Access to reproductive health services and to family planning options are an important part of the work that needs to be done to ensure the advancement of women. Providing such services has enormous health benefits as they contribute to reducing the number of early pregnancies, the number and frequency of births, and improve maternal and child health and household health more generally (Greene and Merrick 2005: 11). Furthermore, having control over their fertility empowers women to invest in their own (and their children's) education, increases their participation in the workforce, and reduces their vulnerability to poverty.

Gender roles, underlying social expectations, and inequities affect girls at a very young age. In developing countries, the fact that the education of boys is prioritized over that of girls, that girls are often kept at home to help with household chores, and that they are more likely to be forced into child marriage are some illustrations

of the social disadvantage girls face early on. Increasingly, efforts have been made to address these disparities and offer girls with better opportunities. Girls who have been disadvantaged by a lower level of education are more vulnerable to exploitation, poverty, marginalization, and are also twice as likely to contract HIV/AIDS in their lifetime (UNICEF 2005). In addition to negative implications of early pregnancies, exposure to gender-based violence, and unequal socioeconomic prospects, women are also at a health disadvantage as they are two to three times more likely to contract sexually transmitted infections (STIs) in contrast to men. Moreover, women are especially vulnerable at a young age (UNFPA 2010a).

Contraceptive prevalence is low among adolescents, especially among the poor, and adolescents are often at higher risk of acquiring STIs and HIV/AIDS (UNFPA 2003, 2010a). Half of the new HIV infections occur among those aged between 15 and 24 (UNFPA 2010a; World Population Foundation 2010). Adolescents are particularly vulnerable to infection due to inadequate knowledge and/or perceptions about transmission of the disease, the higher incidence of STIs, the lack of knowledge of one's HIV status, and broader issues of poverty, limited education, health services, and economic prospects (Kates et al. 2004: 1–2).

Addressing issues affecting youth has become a concern beyond girls and young women, since adolescents have become a key priority group. Adolescence is an important time during which defining experience is gained through education, peers and relationships, and employment (UNFPA 2003). Yet it is also a period when youths are susceptible to unsafe sex, unplanned pregnancy, high un- and underemployment, and the inability to meet their potential or aspirations (Gribble 2010: 1; UNFPA 2010b; Zuehlke 2009b). Adolescents represent the future workforce and human capital of a society, and in developing countries with young populations, adolescents are an especially large demographic group, which is expected to keep increasing during the next two decades. In 2010, close to 45% of the world's population, i.e., 3.1bn people, is under the age of 25, with most youths (almost 90%) living in developing countries (Gribble 2010: 1; World Population Foundation 2010).

In recent years there has been a push for investments in youth and adolescents as a means of enhancing development (Gribble 2010: 1). Fundamental elements to empower adolescents include: education, ensuring sufficient and adequate employment for the young population, protecting adolescents from gender inequity and harmful practices, as well as ensuring access to satisfactory health services. The young population structure and rapidly growing population make these conditions more difficult to meet. When considering labor markets in developing countries, for instance, having young populations generally implies an insufficient supply of jobs for large cohorts steadily entering the workforce, as these economies are not growing as fast as the population (International Labour Organisation 2004; Zuehlke 2009b). However, providing adolescents with sexual and reproductive health information and services would allow them to make choices regarding their fertility as well as plan the timing and number of children they desire. This would enable them to pursue their education, careers, and other aspirations, which generate skills and experience that are much needed for national development, while preventing negative reproductive health outcomes (Gribble 2010: 1).

On the other end of the age spectrum, growing numbers of old people and population aging have also emerged as major concerns. While population aging is arguably the most prominent demographic concern in developed countries, it is slowly but increasingly gaining importance in developing countries as well. In fact, the process of population aging is taking place more rapidly in developing countries today than it did in industrialized countries because of the faster demographic transitions (Barrientos 2006: 2; Chesnais 1990: 336). Moreover, developing countries tend to have very few mechanisms in place to support old people, ensure their well-being, and minimize the burden of old-age dependency. Additionally, traditional support-systems are weakening, and older people in developing countries find themselves depending on their children as well as on their own labor (Cameron and Cobb-Clark 2002: 1). In reality, old people are often a forgotten group in society, as they often face high levels of poverty and low levels of social support. Old people in developing countries are more at risk of "prolonged and frequent poverty spells than other groups" and therefore prone to chronic poverty (Barrientos et al. 2003: 555). This reality is aggravated by other dynamics, such as changing labor market conditions, shifting household structures due to youth migration to urban areas, and increased care-giving to adult children and relatives due to HIV/AIDS (Barrientos et al. 2003: 555; Population Reference Bureau 2007b: 1).

In Nigeria, older people compose the poorest group in the country (Ajomale 2007: 1). Increasing shortcomings of traditional family support, the absence of a social security system to support older people, and the social exclusion they endure make their situation extremely precarious, especially as this group grows in size (Ajomale 2007: 1–2). If population growth slows down, as predicted by the UN Population Division, the proportion of older people will continue to grow over the coming decades and old-age dependency will increase (United Nations 2010d). The need to support old people is undeniable, still awareness of issues facing older people in developing countries remains low (Shrestha 2000: 204). These are some of the reasons that explain why older people have become a priority group in international development.

Most recent efforts to address the position of old people in society have focused on conducting more research and designing social cash transfer systems in developing countries. Asian countries such as Thailand, Nepal, Sri Lanka, Bangladesh, India, Vietnam, Malaysia, the Philippines, Indonesia, and China are seeking improved solutions for social cash transfer schemes targeted at old people (Helpage International 2007: 5–7). These initiatives are especially important as public resources and services tend to discriminate against older people. For instance, health services focus on young children, mothers, and young people due to policy priorities, with the implication that older individuals are excluded from basic health-care services (Barrientos et al. 2003: 564).

Migrants are another neglected group, both in the developing and developed world. There are different types of migrants, with those who migrate for economic or family-related reasons, or others subjected to forced migration. In spite of significant differences, their commonality is that often migrants are vulnerable.

Forced migration and displacement due to violence, conflict, or insecurity is a major humanitarian issue, as there were in 2009 an estimated 10.4m refugees (including those in refugee-like situations), 15.6m internally displaced people as well as 6.6m stateless people (UNHCR 2010: 7). Refugees and displaced people are in difficult and unstable situations with regards to meeting basic needs as well as achieving "durable solutions" to their displacement. Implementation of these solutions, namely voluntary repatriation, resettlement (asylum seeking), and local integration, is complicated and only a small portion of those displaced actually attains a durable solution. In 2009, 251,500 people were voluntarily repatriated and 112,400 were resettled, in contrast to millions of displaced and stateless people (UNHCR 2010: 8). Even voluntary migrants face particular challenges and marginalization, and forced migration highlights the most vulnerable facet of human movement.

Although more research is needed, studies suggest that migrants are generally exposed to unemployment, poverty, and discrimination. The status of migrants often implies fewer rights, lower wages and opportunities, as well as unfavorable access to basic services. In California, the "out-of-school immigrant youth" is a group experiencing such difficulties, although they tend to go unnoticed. These youths have either never been in school or have left school to work and support their families by obtaining low-skilled jobs. They often have achieved low levels of education, their English is poor, they tend to lack health insurance, and they experience high poverty rates (Hill and Hayes 2007: 1).

A key hurdle in the study of migrants is the lack of reliable and comparable data (Goldin et al. 2011: 280–281). A seminal report suggested five steps in order to improve migration data in the long term, with existing institutions and at low cost. Their recommendations, which apply mostly to the US, include: to ask basic census questions (and make the tabulations publicly available); to compile and release existing administrative data; to centralize labor force surveys; to provide access to micro-data, not just tabulations; and to include migration modules on more existing household surveys (Santo Tomas et al. 2009: 11–22).

Despite these difficulties, migrants have very recently emerged as a priority group, especially as they have been particularly vulnerable to the 2008 global economic downturn (Rogers et al. 2009: 37). According to Rogers et al., migrants tend to be employed in economic sectors that were badly affected by the recession, such as construction, tourism, and manufacturing, which has led to a decline in some forms of formal migration and remittances but to an increase of informal migration. In developed countries, like Spain, there have been new signs of public pressure to reduce the number of immigrants. Sadly, this has been accompanied by a growing risk of discrimination and xenophobia against immigrants. The rising hostility in some countries has resulted in new laws and restrictions on migration, as was the case in France in 2010 (Rogers et al. 2009: 37).

The four priority groups identified recently and reviewed in this section, should not be looked at independently, but rather holistically. The rationale is that women, adolescents, old people, and migrants are not isolated but instead interact with each other. The European Union (EU) adopted this approach in a recent policy paper

(European Commission 2005): the Green Paper issued at that time stressed the concept of a new solidarity between generations and the fact that a pact between various groups of the society is needed to foster equitable social policies.

The Challenge of Urbanization

In the first decade of the twenty-first century (in 2009), the world population became more urban than rural, marking a new chapter in global demography (United Nations 2010e: 1). By 2050, two-thirds of the world population will live in an urban area (definitions of cities may vary across countries). Therefore, how populations will be distributed spatially and where they will live represents a major challenge for the future. To put it simply: geography matters.

There are currently "a billion slum[8] dwellers in the developing world's cities, a billion people in fragile lagging areas within countries, a billion at the bottom of the global hierarchy of nations". This highlights the importance of "economic geography" for development (World Bank 2009: 5).

Developing regions account for the majority of urbanization over the past 35 years. Urban population in developing countries increased from 810m people in 1975 to 2.5bn in 2009. In contrast, developed regions experienced more modest growth in urban population, from 700m to 920m over the same period (United Nations 2010e: 3). Future projections show a similar pattern, as much of the population growth expected by 2050 will be in urban areas in developing countries, primarily in Asia and Africa (United Nations 2010e: 1). The world's urban population, estimated at 3.4bn in 2009, is expected to reach 6.3bn by 2050, while the total world population should grow from 6.8bn to 9.15bn over this same period (Medium variant of the 2008 UN population projections). This shows that the major share of the world population growth in the next 40 years will be urban growth, and the level of global urbanization is predicted to rise from 50% in 2009 to 69% in 2050 (United Nations 2010e: 1 & 4).

Natural population increase and rural-urban migration (caused by relatively higher population growth in rural areas) largely explain the momentous growth of urbanization in the developing world. However, the growth of urban areas is not homogenous. The majority of urban centers today have fewer than 500,000 inhabitants and a third have fewer than 100,000 (United Nations 2010e: 5). Simultaneously, there are a growing number of megacities, most of which are located in developing countries. Tokyo is still the largest megacity (the Greater Tokyo Area has a population of 36m), and Delhi, Sao Paulo, and Mumbai immediately follow. Other cities like Kolkata, Dhaka, Karachi, Manila, and Cairo are not far behind (United Nations 2010e: 6–7).

[8] Slums are defined here as densely populated urban areas marked by crowding, dirty run-down housing, poverty, and social disorganization.

Urbanization is part of a country's demographic transition, but also part of its development. It is characteristic of growing economies, but also of countries experiencing declining fertility levels. Even in small urban centers and among poor urban populations, families are smaller than in rural areas, and fertility levels decline more rapidly. Nevertheless, rapid urbanization comes with challenges such as population density, demand for basic services, and pressure on public infrastructure.

These challenges are magnified in developing countries where urban planning tends to be insufficient, infrastructure is inadequate, and public finances are limited. Moreover, urban governance is also deficient (National Research Council 2003: 408–409). In 2009, 83% of governments considered the spatial distribution of their population as a concern with respect to urbanization, both in light of its opportunities and challenges. Among developing countries, 58% desired major changes in the spatial distribution of their populations while 28% desired minor ones. Notably, the strongest dissatisfaction with population distribution was in Africa and Asia, also the regions with the highest rates of urbanization (United Nations 2010e: 13). An especially challenging aspect of urbanization is the rapidly growing concentration of people on coastlines, which results in increasing vulnerability to climate change.

Urbanization is "driven by the concentration of investment and employment opportunities in urban areas" (United Nations 2010e: 14). Better economic prospects and living standards, and chances of higher income motivate migration from rural to urban areas despite problematic elements of density and rapid urbanization, such as air pollution and related pulmonary disease, crowding, infectious diseases, and poverty. In fact, despite these challenges, urban areas provide opportunities that would not be found elsewhere. This is why individuals migrate and are resolved to accept the often precarious conditions in slums and poor urban areas. As more people move to cities in developing countries, slums are a natural outcome. It is the only way to accommodate rapid growth and has characterized urbanization in all countries following their path to higher development and income. Slums have enabled millions of people to live in urban areas with all the required flexibility to effectively allocate the labor force to the economic demand. Despite the challenges, such as poverty, which is typical of slums, the slum is the adjustment variable of any fast growing urbanizing economy.

Cities and towns attract investment, capital, and business, which generate jobs, ideas, innovation, and most economic growth (United Nations 2010e: 14). Major developments, such as technological progress, improved health and education, as well as increased productivity have historically and currently still do occur in urban centers, and then spread to rural areas. The concentration of these elements in certain areas reveals the advantages of propinquity or proximity/nearness (McGreevey et al. 2008: 605). The underlying idea is that economic development and urbanization go hand-in-hand (Glaeser 2011: 6–15). Evidence confirms that the concentration of economic activity increases with development, and that income, consumption, and production are also higher with higher population densities (World Bank 2009: 49 & 57).

Economic development is characterized by modernization, and the shift from an agrarian-based to an industrial-based economy (McGreevey et al. 2008: 619). Eventually, countries make, at a more advanced phase of development, another transition to a service-oriented economy, as is the case in developed countries today (World Bank 2009: 57). Production is more efficient where businesses, industries, and services are concentrated because proximity and higher density enable more trade, the exchange of ideas, more effective labor markets, and lower transportation costs (Henderson 2000: 1). In the US and later in Europe, urbanization and productivity growth took off jointly after 1870 at an extremely rapid rate (McGreevey et al. 2008: 620). Urbanization resulted in the availability of a large pool of labor for industries and businesses, as technological advancements enabled extensive productivity gains. More recently, in the case of economic development in Asia, urbanization has mostly been spearheaded by industrialization and a surplus of employment options in urban areas, a situation that greatly differs from urbanization in other parts of the world (McGreevey et al. 2008: 633; Bloom et al. 2008: 10).

Important factors in the relationship between urbanization and economic development are health care and health outcomes of urban populations. Major benefits of urbanization and propinquity were reaped once health conditions improved, with water and sewage infrastructure, the decrease in (and control of) infectious and communicable diseases (ICDs), and the decline of urban mortality rates. In the early stages of urbanization, cities and towns were plagued by diseases such as dysentery, typhoid, and cholera, among other illnesses due to poor living conditions, polluted water, and limited public infrastructure. Once improvements in health care and public infrastructure were made (e.g., sewage and water treatment), better health and urbanization grew with higher income and economic growth (McGreevey et al. 2008: 605).

In large parts of the rapidly urbanizing world today, conditions are not always so promising. Consider Mumbai, one of the world's most rapidly growing megacities, with its population having close to tripled in the past 25 years, reaching 19.7m inhabitants in 2009 (United Nations 2010e: 6). Half of Mumbai's population lives in slums (Bapat and Agarwal 2003: 72), and in some areas it is estimated that there are up to 50,000 people living per sq. km. Inequality in Mumbai is severe, and it is clearly marked by the inability for the poor to afford land and access clean water and sanitation, as well as the unequal distribution of basic services including amenities such as electricity. Poor families – and especially women – primarily endure the brunt of these deprived conditions. Representing a disproportionate share of illness and labor in Mumbai, poor women queue for hours to collect water from public standpipes, pay high prices for a few liters of water, and because there are no toilets, they often use open land (often exposing themselves to molestation and sexual abuse) (Bapat and Agarwal 2003: 71–74).

Generally, slum dwellers do not have access to basic services or amenities because settlements are considered an "illegal occupation of land", unless settlers go through regularization process (Burra 2005: 69; Baud and Nainan 2008: 486). Until they have been regularized, they "have no proof of residence or rights to basic services" (Baud and Nainan 2008: 486). Most slum dwellers are from low castes,

adding an entrenched social dimension to the nature of urban inequality. As middle and upper classes are expanding, their demands are putting pressure on the government to expand basic services, infrastructure, and housing as they are becoming recognized residents. In some cases, middle and upper classes are pushing the government to remove slums because slum settlements are allegedly illegal (Baud and Nainan 2008: 486).

Rapid urbanization in many developing countries goes along with unplanned settlements, expanding slums, growing urban poverty, substantial inequalities, pollution, overcrowding, infectious and communicable disease (ICDs), environmental degradation, natural resource depletion, high unemployment, and population pressure. Yet it can be argued that these issues reflect some of the conditions experienced by developed countries at their early stages of urbanization. The *World Development Report 2009: Reshaping Economic Geography* highlights that the pace of urbanization and its link to economic growth are not "unprecedented" (World Bank 2009: 49). Historically, levels of urbanization rose rapidly and then leveled off (World Bank 2009: 57).

Rapid urbanization today comes with distinct problems. In Central and Latin America, soaring crime rates and gang violence are widespread in large cities and urban areas (e.g., Mexico City, Ciudad Juárez, and Rio de Janeiro). In the Philippines, urbanization is associated with intense population pressure on the environment and with severe environmental degradation. In sub-Saharan Africa, high levels of unemployment in urban centers are characteristic of rapid urbanization (e.g., Dar es Salaam, Johannesburg, Lagos, and Nairobi).

Although there is some evidence that urbanization in Africa is linked to industrialization (World Bank 2009: 59), problems associated with rapid urbanization remain substantial and effectively represent one of the biggest development challenges of coming decades. When considering patterns of migration and socioeconomic conditions, African urbanization appears to result from "population pressure, civil conflict, and changing political regimes as well as ethnic tension and a momentum effect" (Bloom et al. 2008: 10; see also McGreevey et al. 2008: 633). In coming decades, these problems will become more urgent and will be magnified. It is now widely acknowledged that many countries will need to address urbanization if they want to achieve their MDGs goals (United Nations 2010a: 27) and to adapt to the effects of climate change. Urban populations will be also vulnerable to rising sea levels, floods, landslides, heat/cold waves, and other challenges to water quality and storage (UN-HABITAT 2008: 2).

A major issue in terms of urbanization today is the fast growing concentration along the coastlines and the resulting increased vulnerability to natural disasters (e.g., tsunamis) and climate change. It has already been widely established that developing countries are the most vulnerable to such phenomena and tend to have limited capabilities in place to adapt and mitigate their effects. These concerns are especially true in relation to urban areas in developing countries, where populations are large, concentrated, and growing. These populations are the most at risk from "storms, floods, heat waves and freshwater shortages that climate change is bringing or will bring" (Reid and Satterthwaite 2007: 1). Coastal cities are especially at risk

of high tides and storm surges. There is also a risk of rising sea levels threatening foundations of buildings, or saltwater entering groundwater sources. Cities inland are more exposed to floods and landslides when they are near rivers and mountains, and to other consequences of extreme weather patterns in addition to a general worsening of air pollution in most urban agglomerations (Reid and Satterthwaite 2007: 2).

Such conditions call for proactive urbanization policies, with adequate urban planning and management. The most common policy implemented by governments to influence spatial distribution and internal migration is aimed at slowing down or reversing migration from rural to urban areas (United Nations 2010c: 29), as there is a quite traditional negative bias toward urbanization. In fact, 72% of governments in developing countries had such a policy in 2009 (United Nations 2010c: 29). However, there are limitations to this approach, and most such policies have generally been quite ineffective, with the exception of China where there has been some success. There is a gap in productivity, wages, and welfare between urban and rural areas. In developing countries, populations in cities generally fare better than their counterparts in rural areas. Although it is believed that these areas will converge in the long run (World Bank 2009: 62), there is still substantial economic motivation for rural-urban migration.

Policies that address urbanization specifically focus on developing and improving living conditions in expanding cities and towns. "Urbanization policies" tend to be divided in regulatory and positivist policies, with the former focusing on regulations on urban expansion, "zoning, land division, building codes and standards", whereas the latter focuses on "public land acquisition and allocation, investment in public infrastructure, and public-private partnerships for urban development projects" (United Nations 2010c: 30). In developing countries, this is being translated in various initiatives to enhance living conditions for the urban poor (United Nations 2010c: 30). As poverty reduction efforts and economic development policies increasingly seek to be inclusive, urbanization policies need a similar approach. Numerous countries are implementing pro-poor policies in order to promote inclusive urban "citizenship," with the view of improving living conditions for the urban poor in addition to various slum upgrading schemes (UN-HABITAT 2010a: 10).

Turning again to Mumbai, the city is experiencing various initiatives of "slum upgrading", including resettlement plans (designed with community participation) and compensation for those displaced. These efforts have been driven by communities, NGOs, and civil society organizations, of which the latter two have been crucial for the provision of services (Burra 2005: 71–72). Although legislation was adopted to protect slum dwellers from removal, and funds and subsidies were made available by the government for resettlement (these funds are still limited and difficult to access), there is no central government policy for slum upgrading. Many government offices do not agree on a clear policy, and are not involved in a consistent manner, although local governments have facilitated several initiatives.

The reality remains that slums in Mumbai are growing much more rapidly than the pro-poor urbanization framework that has emerged. Urbanization policy in Mumbai highlights that improvements can be made through communities and

non-governmental partners, but also points to the need for the central government to become more effectively involved, design a comprehensive policy, and ensure sufficient resources for urban development (Burra 2005: 87–88). One of the major issues is that slums are on land that belongs to an array of owners, whether it is a municipal corporation (Bapat and Agarwal 2003: 72), private owners, or the Mumbai Port Trust. The lack of ownership tends to result in even more precarious living conditions and prospects.

Although the situation of Mumbai is very different from many other parts of the world that are also urbanizing rapidly, land tenure is a major problem in many parts of the developing world, and particularly in urban areas (de Soto 2000: 153–206). Most governments fail to acknowledge and effectively address land tenure in urban settings. In Africa, the majority of the urban population relies on informal transactions and land markets, which can in some way operate more effectively than formal land markets (UN-HABITAT 2010b: 2). However, such mechanisms generally imply that the poor, urban population does not have access to secure land tenure, pushing them to marginalized areas, while providing little incentive to improve dwelling and to take care of the land (United Nations 2010c: 31). This contributes to added insecurity for the urban poor, inadequate living conditions, environmental degradation, and geographical as well as wealth partitions in urban areas. Urban policies in developing countries are rarely geographically inclusive as they tend to focus quite strongly on certain cities and towns, which can underestimate the interdependence among different areas and contribute to growing inequities within and between areas (i.e., within an urban center or between rural and urban areas) (World Bank 2009: 199). In reality, economic integration is a successful approach to generate immediate benefits from economic and demographic concentration, with the goal of achieving convergence between areas and groups in the long run.

Despite numerous challenging consequences of rapid urban growth, there are also positive developments taking place in densely populated urban areas and slums. On the one hand, there is the reality of overcrowding, growing air pollution and heart disease, and the visible "urbanization of poverty". On the other hand, there is the rapidly modernizing and thriving economy, successful and informal businesses, and a real notion of "slums of hope" (Husock 2009). It is crucial to keep both sides in mind to fully appreciate the opportunities urban dwellers seek and create, as well as the challenges that come with enormous and expanding concentrations of makeshift settlements around urban centers.

Challenges posed by rapid urbanization in developing countries do not call into question the link between urbanization and economic development, or the advantages of propinquity. Rather, history shows that substantial investments in public infrastructure, urban planning, and better health care will enable countries to fully benefit from urbanization, with enhanced income growth and economic development (McGreevey et al. 2008: 633). Therefore, policies aimed at improving infrastructure, health care, and inclusive urban growth are necessary to reap the positive outcomes from urbanization and to avert the negative effects of overcrowding, urban poverty, and unemployment.

New Bioethical and Gender Issues

The last decades have seen major developments in the area of assisted human reproduction. This has helped fulfill the agenda of reproductive rights, namely that individuals and couples have the right to freely and responsively decide the number and spacing of their children (including the right to have access to services for infertility and contraception). However, recent trends of sex selection have also brought serious threats to gender balance in some countries. Finally, significant increases in human longevity have also brought about new ethical issues.

Louise Joy Brown, born on July 25, 1978 in Oldham, Greater Manchester (UK), was the world's first baby conceived by *in vitro* fertilization (IVF). Her parents, Lesley and John Brown, finally succeeded in conceiving after 9 years of failed attempts. At the time, their success was unique among the more than 10% of all couples worldwide that suffer from infertility (Jack 2010).

In recent decades, human reproduction has increasingly relied on modern biotechnology, and reproductive technology has become more complex. Most assisted reproductive procedures involve manipulations of the gametes, i.e., sperm and eggs (ova). Many of the newest approaches are derived from the initial *in vitro* fertilization technique. However, older technologies, such as artificial insemination remains important (Mastroianni 2003: 849).

The development of assisted reproductive technologies (ARTs), as these procedures are known, "has occurred at a breathtaking rate" (Mastroianni 2003: 851). The advances in ARTs have broadened individual reproductive choices. Infertile women[9] have been given the opportunity to conceive, and so have men with subfertility or even complete absence of spermatozoa by using their own genetic material (or genetic material from donors).

In the process, societal norms have been strained. Reproductive technologies have also raised ethical discussions because "ethicists do not agree on the moral status that human embryos deserve" (Dickens 2003: 852). A host of new technical and legal issues have been raised with respect to reproductive technology including, but not limited to, legal status of children, rights of sperm's and eggs' donors (should they remain anonymous?), and the oldest biological and legal age of parents and donors.

At this stage, however, it appears that the macro-demographic impact of the new reproductive technologies is still limited. Although an estimated four million children have been conceived using reproductive technologies since the first such birth in 1978, babies conceived in this way still represent a small fraction of all births (about 4% in countries, like Denmark, where ARTs are used to the greatest extent).

However, another issue, namely the sex selection of unborn children, could have far-reaching demographic consequences. It creates serious imbalances between the sexes. Sex selection of fetuses, which most often enables parents to eliminate potential baby girls, has triggered what has been called a *gendercide*. The

[9] Infertility may also be a consequence of sexually transmitted infections (STIs).

phenomenon has taken major proportions because of the sheer demographic size of countries that have been most affected, particularly in South and East Asia.

Focus: "Missing" Girls

In several countries, the preference for a son over a daughter has created the "missing" girls phenomenon. At least 100m newborn infant girls have disappeared or have not been born. In some societies, especially when reproductive decisions are constrained, preferences for a male baby are so strong that female fetuses may be aborted and baby girls killed or neglected. Apart from being a gross violation of human rights, this type of gender-selection also has many social and economic repercussions. The normal sex ratio at birth is around 105 boys for every 100 girls. However, societies' and families' preferences for a son rather than a daughter have grossly distorted the natural ratio. "In China and Northern India more than 120 boys are being born for every 100 girls" (The Economist 2010: 13). In China in the late 1980s, there were 108 boys for every 100 girls. In the 2000s, this ratio increased to 124 boys for every 100 girls. In several Chinese provinces, the ratio has even reached 130–100.

Gender imbalance among newborns is a serious demographic problem facing China's 1.3bn people. For years, China's One-Child Policy has been blamed for the imbalance. The Chinese population policy may have indirectly led to gender-selection abortion, female infanticide, and/or female infant neglect because parents were forced to have only one child and wanted strongly to have one son for socioeconomic and cultural reasons. Ironically, it was the wide availability of ultrasound machines (spread all over the country to make sure women had their IUD in place) that made gender-selection abortions possible on such a large scale.

Preference for male children is also widespread in India, Taiwan, Singapore, the Balkans, and even in parts of America's population (e.g., among Chinese- and Japanese-Americans). In these countries, it afflicts the poor and the rich, the educated and the illiterate, and people of all religions. However, in China, it is more acute in rural than urban areas. This suggests there is more to the story of "missing" girls than simply policy. In fact, "the destruction of baby girls is a product of three forces: the ancient preference for sons; a modern desire for smaller families; and ultrasound scanning and other technologies that identify the sex of the fetus" (The Economist 2010: 13). The desire to have a smaller family often means that unborn daughters will be sacrificed in pursuit of a son. The male to female ratio becomes even more skewed with higher birth orders, as pressure to have a son increases. In China, smaller family size was obtained by coercive policies as the population did not desire it.

It has been suggested that under-registration of newborn girls accounts for the excess of boys. However, a study in China found that what really accounts for the excess of boys is the rise of sex-selective abortions. It is important to note that when substantial proportions of the population do not have physical and financial access to ultrasound technology, sex selection can also take place after birth (Das Gupta et al. 2009: 403). Officially, sex-selective abortions were banned in India in 1994 and the following year in China (The Economist 2010: 79). Despite this, the prevalence of abortions has not decreased, since it is almost impossible to prove that an abortion was performed because of sex-selection. In Vietnam, the availability of ultrasound technology and permissibility of second trimester abortions have unfortunately facilitated sex-selective abortions (Bélanger and Thi Hai Oanh 2009: 163; Hoang et al. 2008: 146). In response, in 2003, the government introduced legislation under the Population Ordinance, which banned such practices (Bélanger and Thi Hai Oanh 2009: 163). Whether or not this legislation has been effective is not clear because of the unknown cause of most induced abortions.

It should be noted that the ratio of male to female babies increases as income and education increase. This finding debunks the myth that "backward thinking" is responsible for the sex ratio imbalance. It suggests that the spread of fetal-imaging technology may be a main cause instead. Richer, well-educated families tend to have smaller families, and their

preference for a son exerts greater pressure on the family to have a boy (The Economist 2010: 79). Again, the case of China might be different because of coercive policies.

The sex ratio imbalance has many other negative consequences for society (Attané 2010: 201–209). One of these is a shortage of brides. In 2010, the Chinese Academy of Social Sciences (CASS) has found that if the trend of not valuing baby girls continues, then within 10 years one-fifth of men would be incapable to find a bride (The Economist 2010: 77). According to the CASS, China will have by 2020 30m to 40m more men aged 19 and below than women. To put this statistic in perspective, there are 23m men below the age of 20 in Germany, France, and Britain combined. There are around 40m boys and young men in the US. A side effect of the increase in the sex ratio in China, and a positive one for that matter, has been an increase in China's savings over the past 25 years. Parents with a single son saved more in order to increase his chances of attracting a wife, especially given the dearth of eligible bachelorettes.

Another consequence of the sex ratio imbalance is increased violence (Hvistendahl 2011: 225). "In any country rootless young males spell trouble; in Asian societies where marriage and children are the recognized routes into society, single men are almost like outlaws" (The Economist 2010: 13). New research has focused on the plight of these young men deprived from the joys of marrying and parenting. Crime rates, bride trafficking, sexual violence, even suicide rates are all on the rise as the sex ratio becomes more lopsided. The increase in the sex ratio in China accounted for about one-seventh of the rise in crime, and similar results have been found in India (The Economist 2010: 79).

South Korea seems to be the only country that used to have a very high sex-ratio, similar to that of China's, which has made some radical improvements. South Korea's sex ratio, although still high, is now getting closer to normal, and this has been attributed to a change in the culture, an emphasis on female education, anti-discrimination suits, and equal-rights rulings eliminating the need for old fashioned preference for a son (Chung and Das Gupta 2007: 778). China and India may experience reductions in son preference even before these countries become as developed as South Korea. These countries have put in place strong public policies addressing gender inequality, which will trigger the shift away from a focus on son preference. Also, they are well underway in industrialization and urbanization, two other key factors that have aided South Korea in its transition (Das Gupta et al. 2009: 413).

In order to correct the imbalance in sexes, countries need to raise the value of girls, encourage female education, abolish laws and customs that prevent daughters from inheriting land, engage women in public life, and make bad examples of hospitals and clinics with skewed sex ratios (The Economist 2010: 13). There does not seem to be a "quick fix" for the situation, and it is not as simple as reforming policy or modernizing society. It might take quite some time, but eventually change is expected to happen. There is already evidence of incipient declines in national child sex ratio imbalances in both China and India (Das Gupta et al. 2009: 412).

In addition to reproductive technology, recent decades have brought about major increases in human longevity, which have been triggered by technological innovations, better health care and medicine, improved living conditions, and economic prosperity. These new trends have opened new avenues in the ethical debate. The issue of euthanasia comes to mind, defined as "the intentional taking of a person's life from a beneficent or kind motive – typically in a case of grave and terminal illness" (Frey 2003: 323). Increasingly, however, the concept of euthanasia has also come to cover cases when a person, although gravely ill, is not threatened by immediate death but does not want to endure major suffering and terrible living conditions.

Moral considerations on euthanasia are largely determined by the fact that quality of life can deteriorate massively, especially at the end of life. New measures,

such as the DALYs and the quality-adjusted life year (QALY[10]) have attempted to quantify this phenomenon. In the debate on euthanasia, the main ethical issue is the judgment that one can make on the worthiness of other people's life.

Discussions on euthanasia usually distinguish between active and passive euthanasia, where the passive form implies omitting steps to save a life or stopping treatment altogether. There are also voluntary, involuntary, and non-voluntary forms of euthanasia, depending on whether steps are taken with the consent of the patient or not. Non-voluntary euthanasia refers to the situation where medical and legal authorities deem a patient incapable of making decisions about his or her own life. A distinction is also made between physician-assisted suicide and euthanasia, whether the last causal factor is the patient or the doctor, respectively (Frey 2003: 323–324). Finally, euthanasia raises difficult legal problems that cannot be resolved easily.

To conclude, it is expected that other biotechnologies, such as human cloning (the creation of a genetically identical copy of an existing or previously existing human), could make the ethical dimensions of reproductive technology even more complex. With respect to the longevity of human life, stem cells research (a technology that focuses on using undifferentiated cells therapeutically to treat human disease and injury) will definitely add new dimensions and difficulties to these ongoing ethical discussions.

Redefining Population Policies

Arguably, policymakers are now confronted with a much larger range of demographic issues than ever before. They are also forced to reassess the priorities and sharpen the intervention strategies of the population policies.[11] Therefore, it is timely to re-examine the relevance, the content, and implementation mechanisms of population policies.

[10] In addition to the DALYs (see footnote 15 in Chap. 2), another indicator that seeks to measure the quality of health and the value of health outcomes is the Quality-Adjusted Life Years (QALYs). A QALY is a year of life that is adjusted for its quality or value. The utility induced by a treatment (with the length it is used) is calculated and provides the number of QALYs gained. This allows QALYs to be incorporated in medical costs and help establish the cost-effectiveness of certain treatments in the long run. Similarly to the DALYs, the QALY indicator has some shortcomings, mostly linked to its numerical components and its inadequacy in measuring more qualitative aspects of health. Nonetheless there are significant efforts to redefine the QALYs by: (i) incorporating additional measures to the existing indicator, (ii) analyzing the underlying assumptions, and (iii) including other paradigms as its foundation; see Smith et al. (2009) and Pietro and Sacristán (2003).

[11] UNFPA, for instance, will need to "narrow its focus to again become one of the most important and visible vehicles for promoting sexual and reproductive health and reproductive rights globally and in developing countries"; see The CGD Working Group on UNFPA's Leadership Transition (2011: 9–19).

As far as fertility is concerned, the LDCs and particularly Central and Western Africa still face very high fertility levels. To be sure, the question of how to trigger fertility decline, particularly in rural areas, remains quite difficult in a context of low female and male education attainments, gender inequality, and poor management capacity. Programs will need to be informed by gender concerns and work across sectors such as education, health, and legal reforms. Since the broad reproductive health agenda might not be efficient in situations of incipient fertility decline, population policies in this part of the world will have to focus specifically on family planning services, female education, and female legal and economic autonomy. Nonetheless, a detailed analysis of the proximate determinants of fertility for sub-Saharan Africa has demonstrated that birth rates will not decrease rapidly unless major programmatic efforts are put into place to boost contraceptive prevalence rates and bring about a significant shift toward modern and long-term contraceptive methods (Guengant and May 2002: 89).

Fertility policies in sub-Saharan Africa will also need to be complemented with programs geared at the survival of mothers and children. Such policies will be compelled to explore linkages and find synergies with HIV/AIDS programs, particularly with regard to the supply of condoms and the prevention of mother-to-child infection. The HIV/AIDS crisis has shown the difficulty of organizing preventive programs and designing effective interventions to change behavior. The epidemic has also highlighted the need for drugs and possibly vaccines to reduce the viral charge of infected persons and slow down viral transmission. The effect of population growth on the environment in some countries has also created new types of problems since physical limits caused by over-population might have already been reached in some countries. These countries could be faced with situations of "demographic fatigue", defined as the inability of governments to cope with the consequences of rapidly expanding populations (Brown et al. 2000). Worst-case scenarios could even lead to political destabilization (Kaplan 2000; Sciubba 2010).

Yet despite the dramatic demographic increase that most sub-Saharan African countries must confront, demographic issues are conspicuously absent from the African development debate (May and Guengant 2008). African leaders, in particular, have been reluctant to address these issues directly. As very little political will is being expressed with respect to addressing demographic patterns and trends, donors have inferred that there was no interest and/or need to intervene.

Still, there is an urgent need to tackle high fertility (Das Gupta et al. 2011: 2; Potts et al. 2011: 95–97). First, slower population growth will help reduce pressures countries face with food security, land tenure, environmental degradation, and water supply. It will also ease security problems that are often the result of conflicts over scarce resources, which are exacerbated by unsustainably high rates of population growth and widespread youth unemployment. Second, economic growth rates in the order of 6% per year translate into only half that level per capita because of the current pace of demographic growth. This jeopardizes poverty reduction efforts and also prevents countries from achieving their "education for all" target, a prerequisite to development. Unless fertility declines, attainment of the MDGs will remain an ever-receding mirage. As the East Asia experience has shown, a slower rate of

population growth leads to more favorable dependency ratios – limiting the number of child dependents on a comparatively larger, productive workforce. Third, another urgent priority is to address high fertility levels from a gender and health perspective. Many African women, both urban and rural, are still desperate to get contraceptives. However, they are prevented from doing so because of gender inequalities, cultural and religious traditions, and inadequate family planning services. Addressing these unmet needs (World Bank 2010b) will greatly improve women's health outcomes by lowering maternal mortality and enabling them to realize their own economic potential, while also adding to Africa's economic growth.

In recent years, the highest level of leadership in sub-Saharan Africa has modified, albeit timidly, its attitudes with respect to rapid population growth. African leadership will need to overcome three misconceptions, namely: (a) that socioeconomic development alone will trigger the demographic transition (Potts et al. 2011: 97); (b) that the demographic future is a given and that one cannot act upon demographic variables; and (c) that demographic variables cannot be modified *in the short term*. Four concrete steps should help family planning program to take off, namely comprehensive advocacy activities, strong commitment from governments, permanent communication campaigns on family planning, and efficient commodities' supply-chain and logistics. Governments will need to out-source key activities of family planning programs to the private sector and NGOs. Such an approach should enable countries to achieve the programmatic objective of increasing their contraceptive prevalence rate (CPR) by 1.5 percentage points increase per year (Toubon 2009).

Slowing down the pace of demographic growth is a prerequisite to improving Africa's human capital and its economic performance. By addressing demographic issues decisively, Africa's leaders will be able to embrace the continent's challenges, without the stigma of poverty, famine, and civil strife that unfortunately still haunt too many sub-Saharan countries.

In countries where fertility rates have fallen to between four children per woman and the replacement level, efforts to complete the fertility transition should be complemented with public health and social development interventions. In some countries, population policies might benefit from linkages with public health interventions in order to mitigate the mortality caused by alcohol, drugs, and addiction to smoking.

Some countries have been able to achieve impressive declines of their fertility levels. Such results have been all the more remarkable in situations characterized by poor attainments in female literacy and widespread poverty. A case in point is Bangladesh, which belongs to the group of LDCs, but was able to trigger an impressive decline of its fertility levels. This was achieved through a combination of strong political commitment, rapid socioeconomic changes, and effective family planning programs, along with the effective support of international development agencies.

Focus: Bangladesh's Fertility Transition in a Poor Setting

The case of Bangladesh is unique insofar as this poor and predominantly Muslim country was able to bring about a significant decline in fertility levels, despite unfavorable economic and social circumstances. With an extremely high population density (1,142 people per sq. km in

mid-2010, although this figure might be overestimated), very limited natural resources, and a high incidence of natural disasters (mostly flooding), the growing population pressure on scarce land resources constantly threatens Bangladesh's primarily agricultural economy.

Following its independence from Pakistan in 1971, Bangladesh was one of the poorest countries in the world, with a gross national income (GNI) per capita at purchase power parity (PPP) of USD370 in 1970. Today, despite substantial socioeconomic improvements, Bangladesh still remains a poor country, with a GNI per capita (PPP) of USD1,440 in 2008. Most social development indicators remain wanting, although they are proportionally better than those of many other countries at the same GNI level (World Bank 2006b). The infant mortality rate is estimated at 45 infant deaths per 1,000 live births and the life expectancy at birth is 66 years for both sexes combined (Population Reference Bureau 2010a).

As early as 1975, the government of Bangladesh recognized that a rapidly growing population would pose significant threats to the country's socioeconomic development. Therefore, the government took important steps to lower the population's growth rate and prepared a Population Policy Outline in 1976. Since then, this emphasis on population issues has been maintained in all successive five-year plans and the population policy was updated in 2004. In the mid-1970s, the Ministry of Health and Population Welfare also began to provide a variety of family planning services. The program included four main components: (i) the use of young, married, and trained women as outreach workers, referred to as female welfare visitors (FWVs) and female welfare assistants (FWAs), to provide contraceptive services and information to housewives in their homes (this was a doorstep program); (ii) the provision of a wide range of contraceptive methods; (iii) the establishment of family planning clinics in rural areas to provide clinical contraceptive services, to which FWAs could refer their clients for long-term and/or permanent methods such as surgical contraception; and (iv) information, education, and communication (IEC) campaigns intended to provide information on contraceptive options, as well as change traditional norms about family size.

Efforts to strengthen the supply of family planning services were supported by international donors, including the World Bank. A donors' Consortium was even established to better coordinate external technical and financial assistance. By 1991, almost all Bangladeshi women had some knowledge of modern methods of contraception. The contraceptive prevalence rate increased from 8% in 1975 (all methods) to 54% in 2010 (modern methods). The total fertility rate was estimated at 7.0 children per woman in 1975 (Cleland et al. 1994) and dropped from 4.4 to an estimated 2.3 between 1990 and 2008 (World Bank 2010a: 132). However, it should be kept in mind that these national averages may mask considerable sub-national variations, the Eastern divisions of Chittagong and Sylhet lagging behind the rest of the country. Moreover, the fertility decline had stalled between 1993 and 2002 (Streatfield and Ahsan 2008: 261).

Yet family planning programs can only partly account for the decline in fertility, because better macro-economic conditions and social factors such as the status of women and changing roles of the traditional nuclear family also influenced fertility outcomes. The status of women gradually improved with primary and secondary school enrollment increasing three and five times, respectively, between 1973 and 1996. In 2004, for every 100 males in primary and secondary school, there were 106 females. Furthermore, women accounted for 37% of the labor force, especially in textile and garment production, where Bangladesh has become a major exporter (including to the US under a special preferential trade agreement).

Female empowerment increasingly gave women more decision-making power over their reproductive health. Gender equivalence lowered fertility by changing the traditional preference of having sons over daughters, which originally led couples to have multiple births until they had a son (however, son preference remains pervasive). Traditional family structures changed as well, which also contributed to lower fertility rates. Land pressure led family members to search for work elsewhere to ensure the family's survival. Whether these separations were temporary or permanent, they influenced fertility outcomes (Adnan 2002: 90–101).

The strong political commitment of the government of Bangladesh and its leaders at the time should be noted as well. While it may be one thing for a Ministry of Health and even Ministries of Education, Women's Affairs or Social Services to argue for better family planning provision, in most countries it is much less likely that a strong commitment by the country's President or Prime Minister is sustained. From early on, the government supported the collaboration of private sector and NGOs' engagement regarding family planning and reproductive health care, such as the Bangladesh Rural Advancement Committee (BRAC). Crucially, Bangladesh's Presidents have consistently played a major role in supporting strong population and family planning programs, ensuring that even Ministries of Finance and the country's Military explicitly support fertility-reducing strategies (e.g., at the entrance of the National Assembly building in Dhaka, a plaque referring to the country's population challenges used to be displayed). Today, however, this political commitment toward resolving population issues appears to be less strong.

The success of Bangladesh in bringing down its high fertility levels is probably due to a combination of all the above-mentioned factors. Profound economic, societal, and family changes worked in synergy with female empowerment. This allowed proactive family planning service delivery, both in the public and private sectors, to find a favorable terrain. The combination of a community-based distribution (CBD) approach with quality family planning clinics in the rural areas also helped, and so did family planning supply efforts and a very strong commitment by many stakeholders (Levine et al. 2007). However, the family planning program appears to have lost some of its momentum in recent years.

Today, Bangladesh's population grows at an annual rate of 1.3% and is currently the seventh most populous country in the world, with a total population estimated at 164.4m in mid-2010 (this figure might be overestimated by about 10m). It is projected that the population will reach 222.5m by 2050 (Population Reference Bureau 2010a). This is no time for complacency, since population will continue to grow because of the phenomenon of population momentum. The unmet need for contraception was estimated at 17% in 2007. Family planning services need to step up to address this demand through the use of long-term methods, therefore completing the fertility transition. Economic development efforts, especially through female education, must complement family planning programs to foster the acceptance of modern methods of contraception as well as change traditional and cultural attitudes regarding marriage patterns, family size, and son preference (age at marriage has not increased in Bangladesh). The country needs also to improve urban infrastructure to accommodate a skilled workforce. Last but not least, the problem of slums requires urgent attention as well (Streatfield and Ahsan 2008: 271).

Despite these shortcomings, the experience of Bangladesh could serve as an example for many Western and Central sub-Saharan countries that are struggling to bring about fertility declines. It is an inspiring account of how a poor country with limited resources, but a committed and innovative public sector intervention can reign in a rapidly growing population.

Finally, developed countries are dealing with the issues of sub-replacement fertility, population aging, and immigration. Estimates for France show that between 1946 and 2051 the decline in mortality, in a scenario of low fertility, accounted for only a third of population aging (as measured by the proportion of people aged 60 and over; see Calot and Sardon 1999). Therefore, industrialized countries will have to give higher priority to fertility interventions (Demeny 2011: 269–272). These countries will also need to define and implement comprehensive migration policies devoid of nationalist or xenophobic passions, while remaining in line with democratically defined national interests. Developed countries have already taken several steps in these various areas. For example, the US is planning to increase the retirement age. Many European countries are currently designing

pension reforms. Some countries, in the Nordic region and The Netherlands, have pioneered part-time working arrangements and ushered changes in gender roles, allowing more flexibility for child and elderly care. Other countries have also enacted measures to address specific labor-market needs through targeting highly-skilled and/or less-skilled immigrants. The challenge will be to intervene in a comprehensive way through many policy levers in order to bring the desired societal and demographic changes.

The greatest challenge of all, however, will be to develop a more effective approach to the institutionalization of population policies. Initially, this objective could be pursued through five related efforts. First, policymakers could seek the largest possible public consensus to support the goals of population policies. Identifying the most common denominator to justify a policy might be one way to achieve this goal (e.g., the fertility desires of the couples or achievement of a stationary population). It will also require a great deal of advocacy toward specific constituencies. Second, policies could be organized around a few dynamic concepts such as the principle of equity, gender equivalence, or the fight against poverty. A coordinated approach across multiple sectors will be needed to implement this new vision effectively. Third, new policies will have to be more participatory and consider the increased number of actors and stakeholders. This will call for an improvement of policy coordination mechanisms. Fourth, additional data must be collected, particularly on equity issues and international migration. Better data could also help design new models of policy interventions and enhance their effectiveness. Fifth, the implementation of new policies will have to integrate results of ongoing analytical research.

Conclusion

To a large extent, population policies or their absence will determine the demographic evolution of human societies. The fulfillment of the MDGs, of which several pertain specifically to population and reproductive health issues (UNDP 2003) will depend on successful interventions to change demographic patterns and trends. The attainment of global food security goals and improvements in nutrition levels in developing countries will also be influenced largely by the success of population policies, as these are based on the assumption of declining fertility levels. Overall, population policies or the lack thereof will determine efforts to eradicate poverty and reduce other social inequities.

Far from being old-fashioned, population policies appear therefore to be even more relevant today. Moreover, demographic variables are amenable to change. Well-designed population policies can be effective and cost-effective (efficient). In addition, results can be obtained over a relatively short period of time, say 10 or 20 years, and not only in the long term.

In their heyday, population policies aimed at improving mortality conditions and, especially, decreasing high fertility levels. Instruments of choice were vaccination

campaigns and family planning programs that were established around the world. Today, however, population policies need to address a host of new issues, including sub-replacement fertility, population aging, international migrations, as well as new bioethical and gender challenges. Policies also need to link to other global policies, like the MDGs, poverty and inequity alleviation, climate change, and environmental sustainability.

Population policies should be voluntary, non-coercive, and mitigate sex-selective abortion. They should also promote gender equity, which should address sex preference and imbalance. To achieve this demanding agenda, however, population policies will need to reinvent their *modus operandi* with the view of remaining relevant in today's ever-changing world.

General Conclusion

The world population surpassed one billion around 1800 and reached a second billion in 1930. The third billion was attained in 1960, the fourth in 1974, the fifth in 1987, and the sixth in 1999. Additional billions added up at an accelerating pace in only 30, 14, 13, and 12 years, respectively. The *first* doubling of the world population between 1800 and 1930 took 130 years. The *second* doubling of the world population, from two to four billion, occurred in just 44 years. The seventh billion will be reached in 2011. This is likely to be the first new billion that will not have been added more rapidly than the previous one. The world population will reach its eighth billion in 2024, i.e., 13 years after reaching the seventh billion mark. The *third* and most likely last doubling of the world population, from four to eight billion, will probably take 50 years. Therefore, despite the huge growth of the population in absolute terms between 1960 and 2011, the rate of growth of the world's population has finally slowed down.

The demographic transition, which has started at different times and has evolved at different speeds in different areas, has brought about striking contrasts between the various continents, regions, and countries of the world. Today, variations of demographic patterns and trends range from very high fertility to sub-replacement fertility situations, from very young to aging populations, and from immigration-open to immigration-shy countries. Populations of developing countries and least developed countries (LDCs) are still growing rapidly. Some very fast growing countries, like Yemen or Niger, will see a tripling or a quadrupling of their population in a mere 40 years. Their exploding populations will undermine their development prospects and could possibly threaten their existence as nation states.

At the extreme end of the spectrum, developed countries have experienced a major slowdown of their demographic growth. Countries that experience fertility levels well below replacement, such as Germany and Japan will see their population age and dwindle. Sometimes, these countries are even confronted with negative population momentum, meaning that their efforts to increase fertility are failing to improve the balance between births and deaths because of unfavorable age structures.

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0, © Springer Science+Business Media B.V. 2012

Overall, the world has become more demographically diverse than ever. The world population is also much more fragmented politically, into about 240 countries and territorial entities.

After World War II large public health and immunization programs were launched in developing countries and the LDCs. These triggered spectacular declines in mortality and, as a consequence, an acceleration of population growth. Corrective measures were necessary, and they first came in the form of family planning programs, initially in a few vanguard countries and thereafter in many developing countries. A network of national and international population institutions supported the large-scale diffusion of reliable contraceptives.

The major international population conferences held in 1974, 1984 and 1994 further contributed to the internationalization of population issues and to define new population and development paradigms. These eventually led to the advent of more formalized population policies. The main goal of these policies was to curb fertility in order to mitigate demographic growth and population pressure. These programs and policies were undeniably successful: they gave couples access to information and family planning services (even if millions of couples still do not have access to such services today). These policies and programs also benefited from important transformations in the economy and the role of women, as well as the upheaval of traditional attitudes relative to sexuality and reproduction. The fast transmission of new ideas, thanks to mass media and new means of communication, accelerated the process.

Nevertheless, initial population policies were too often top-down and driven by global targets. In some countries, they also resorted to coercion. The shift to individual concerns took place later, in the 1980s and 1990s. At that time, population policies became broader by including in their mandates reproductive health, following the recommendations of the International Conference on Population and Development (ICPD) held in Cairo in 1994. The ICPD established that population objectives would be reached faster if couples' and individuals' needs were taken into account instead of imposing macro-demographic goals. Population policies also came to include a series of new issues, including women's empowerment, the fight against poverty, and the protection of the environment.

This inclusivity trend led to policies that were more open to international efforts in economic and social development, as well as poverty alleviation. The last 20 years have also seen the forging of a stronger relationship between human development policies (including those regarding population) and human rights considerations, partly to counter the past abuses of some family planning programs. Basic services in health, reproductive health, as well as education are now considered to be part and parcel of individual rights, even if financial means are not always readily available to fulfill these new ambitions.

In recent decades, new challenges for population policies have emerged as well. In some countries of sub-Saharan Africa in particular, the HIV/AIDS epidemic could modify the completion of the demographic transition. Fast growing populations may face specific security challenges, triggered by the youth bulge and the difficulties of providing employment to ever-larger cohorts of young men and

women. Although emigration trends will bring some benefits in the form of remittances in developing countries and LDCs, the heavy "brain drain" might also deprive these countries of much-needed human capital. Urbanization trends will also pose new challenges for social inclusion and equity. Finally, the major threat of global warming and climate change will affect poor people and poor nations disproportionately.

Many developed countries, especially in Europe and Asia, are seeing rapid population aging triggered by low fertility levels and accelerated by longer life-spans. They will soon face the issue of depopulation. Policies to increase fertility have not yet proven very effective, especially in East Asia. Immigration flows that developed countries must accommodate and the difficult debate about replacement immigration are also stirring up nationalist reflexes and identity crises.

Population policies, or the absence of such policies, will determine to a large extent the demographic evolution of human societies. For instance, the fulfillment of the Millennium Development Goals (MDGs) will depend on successful interventions to change demographic patterns and trends. In turn, these patterns and trends will affect efforts to eradicate poverty and reduce other social inequities. The attainment of global food security and nutrition goals, particularly in developing countries, will also be influenced by the success of population policies, as these projected outcomes are based on assumptions of declining fertility levels. It could also be argued that international security goals will depend on the results of policies aimed at mitigating the socioeconomic consequences of the youth bulge, such as uprisings and civil conflict.

In this age of globalization, it is tempting to imagine that population patterns and trends are shaped by transnational forces. Indeed, mass media, instant communication, and international migration movements make our world smaller. All these phenomena exert a profound influence, even at local level. The international transmission of experiences between countries also helps to accelerate the design, adoption, and implementation of population policies. Nevertheless, population policies, or their absence, are still dictated mostly by processes that work at national level. At the end of the day, governments themselves will need to design policies to address their own demographic issues. Governments, with the support of their development partners, will need to implement the policies, after obtaining the agreement of their national public opinions. Policies on migration also need to be enacted by the states, either on the sending side or the receiving end, although this process can be facilitated by transnational agreements.

The context in which population policies operate is determined by three major factors, namely the demographic issues that have to be addressed, the strategies that must be implemented, and the stakeholders who need to be mobilized. However, this context has changed considerably. Population policies are now confronted with a much larger range of demographic issues than before. Moreover, they are compelled to reassess their priorities and sharpen their intervention strategies.

Three major issues need to be addressed before designing and implementing population policies. First, one must ascertain the very nature of population policies. Is obtaining public goods the paramount aim of population policy

interventions? Should taxpayers' money be used to obtain these public goods? What is the role of the state in implementing population policies? Should programs be geared at reducing inequities? Or should policies guarantee fundamental human rights instead?

Many neo-classical economists tend to believe that governments have to provide public goods, as well as to correct market failures (unless an attempt to correct them would result in governments' failures of a larger magnitude). In their view, the supply of family planning in high fertility countries can be supported to correct possible market failures, for example the lack of adequate information on contraceptives as exemplified by the fear of side effects. However, they may argue that (some) population policies neither provide public goods nor correct market failures. Other development theorists claim that the pursuit of public goods is needed to alleviate poverty and reduce inequity. To these arguments, some may add rights considerations, and therefore frame the pursuit of public goods as a fundamental human right.

Second, to be meaningful, policies must be anchored into a large consensus on important population and reproductive health issues and how to address them. This aspect is related to the idea of the minimum justification of policies. Population policies may play the role of a social catalyst by promoting a few strong ideas, such as the alleviation of poverty and the reduction of inequity. However, this book has shown how the climate around population policies can be contentious and divisive. Conservative and liberal ideologies clash fiercely on reproductive health issues. Abortion politics in the US have taken their toll as well. Population policies and particularly family planning programs had their heyday decades ago, but are no longer in vogue. The attention to population issues has faded as new development concerns have appeared, including HIV/AIDS, climate change, and governance. In this context, it is difficult to address the fundamental population issues, and particularly to address them over a long period of time with the constant attention they require.

The third issue is the need for evidence-based population policies. The last few decades have brought a wealth of information on population policies and programs. Still, numerous results of this newly available research need to be translated into actionable policies. Moreover, more research is needed as well, for instance to understand emerging issues, such as determinants of the HIV/AIDS epidemic or linkages between demographic trends and climate change. In the case of fertility, policies to decrease or increase high or low levels of fertility, respectively, must address the ideational dimensions of reproductive decisions being made by couples. This will broaden and complement the purely economic interpretations of fertility changes. The call for more research also points to the need to improve systems of data collection, analysis, and results dissemination, in particular on issues of international migration and equity. Better research will help to shift toward a less dogmatic and more empirical approach to policymaking. It will also enable policymakers to anticipate events, instead of reacting to them.

In addition to the resolution of these three issues, population policies will need to become more effective and improve their implementation mechanisms. In this respect, the greatest challenge of all will probably be to develop a more effective

approach to institutionalize population policies. This objective could be pursued through several related efforts, both at national and international levels. First, as mentioned, policymakers should seek the largest possible public consensus to support the goals of population policies. Identifying the most common denominator to justify a policy might facilitate this process (e.g., achieve the fertility desires of the couples). Second, policies could be organized around a few dynamic concepts such as equity, gender equivalence, and poverty alleviation. Policies could also anchor their strategies into larger paradigms of socioeconomic development. Third, new policies will have to be more participatory and include all actors and stakeholders. This will call for major improvements of the policies' coordination mechanisms, especially as the number of national and international stakeholders (e.g., NGOs) has soared in recent decades.

Finally, the unreliability of population policies will have to be assessed as well, particularly when policies aim at specific objectives, such as replacement level fertility. Today, one can reasonably expect that the world population will reach 9.15bn in 2050 (UN population projections, Medium variant; see United Nations 2009d: 48) – but only if fertility rates decline smoothly to their assumed values. A large share of future population growth will come from fertility levels that are still higher than replacement in developing countries and LDCs (aggregate total fertility rates of 2.7 and 4.5 in 2010, respectively; see Population Reference Bureau 2010a). Therefore, the UN population projection (Medium variant) assumes that fertility will continue to decline significantly everywhere, which is not guaranteed. Moreover, even small variations in the ultimate levels of fertility could yield vastly different outcomes in terms of numbers of people.

Looking beyond 2050, levels that fertility will reach eventually will largely determine the final numbers at which the world's population would stabilize.[1] If fertility remains higher than the levels projected by the United Nations, the world population could exceed 10bn by 2100. Young age structures, which are linked to past fertility trends, will induce part of the future demographic growth, through the phenomenon of population momentum. Furthermore, improvements in life expectancy will also contribute to the increase of the world's population, although one does not know the limits to the human life-span. Nonetheless, future fertility (and therefore population) outcomes will depend to a large extent on investments in family planning programs today, particularly in Africa and South Asia.

To sum up, far from being outmoded, population policies are more necessary and relevant than ever for developed and developing countries, including LDCs. Demographers have the responsibility to promote "public demography", namely to reach public audiences with demographic analyses and summaries of research

[1] In its 2008 population projections, the United Nations Population Division uses (for the period 2045–2050) an assumed global (worldwide) average TFR of 1.54 children per woman for the Low variant, 2.02 for the Medium variant, and 2.51 for the High variant; see United Nations (2009d), 10.

results, as well as discuss the meaning of those results and the actions, if any, to be taken by public authorities (Donaldson 2011).

The ultimate goal of the actions taken in the interest of the public good is the well-being and equilibrium of human societies. Nicolas de Condorcet (1743–1794) already knew this when he wrote in The Tenth Stage of his *Sketch for a Historical Picture of the Progress of the Human Mind* (1795): "… by then men will know that, if they have a duty toward those who are not yet born, that duty is not to give them existence but to give them happiness …" (de Condorcet 1995: 161).

Like Condorcet, let us muster the commitment to present future generations with an inheritance at least equal, if not better, than the one we have received ourselves.

Glossary

Advocacy activities by individuals and/or groups with the view of influencing policymakers about policies and, hopefully, mobilizing adequate funding for interventions and programs.

Age-sex structure distribution of a population by age and sex, often given in 5-year age groups.

Age-specific fertility rate number of children born, divided by number of women, in each reproductive age or age group.

Aging and hyper-aging growing proportion of people aged 65 years and above and 80 years and above, respectively. It is accompanied by an increase of the population's median age.

Anti-natalism policy aiming at decreasing fertility; see *Pronatalism*.

Behavior change communication (BCC) communication strategy used to encourage individual change. It often focuses on individual, community, or environmental elements influencing behavior, in order to obtain positive (health) outcomes; see *Information, education, and communication (IEC)*.

Benchmark reference point or standard against which performance can be assessed.

Boserupian alternative counter-argument of creative pressure opposed to Malthusianism, proposed by Ester Boserup (1910–1999). In her view, population growth can contribute to wealth creation as well as support innovation by improving agricultural methods, technologies, institutions, and gender relations.

Brain drain emigration of a significant proportion of highly skilled professionals (e.g., health personnel) to countries that offer better socioeconomic opportunities (opposed to "brain gain").

Circular migration form of migration by which migrants usually from a developing country temporarily migrate to a developed country, contribute to the workforce, and then return to their countries of origin (the migration cycle can be repeated).

Cohort group of people born during the same year or during a number of years (usually 5 years).

Contraception conscious efforts to prevent conception, through the use of methods either modern or traditional.

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DOI 10.1007/978-94-007-2837-0, © Springer Science+Business Media B.V. 2012

Demographic dividend situation in which working age groups expand relative to dependents (with more favorable dependency ratios). It is an opportunity for faster economic growth and development, provided adequate economic and social policies are implemented. The window to capture the benefits of the demographic dividend is limited in time.

Demographic fatigue situation in which rapidly growing populations result in a crisis of education, employment, housing, environmental pressure, and financial insecurity, which governments are unable to deal with effectively.

Demographic security public order and civil strife implications of demographic characteristics such as size, age structure, distribution, ethnic composition, and annual rates of growth.

Demographic transition change (through different phases) from a traditional demographic regime with a high quasi-equilibrium (i.e., high mortality and high fertility), to a modern demographic regime with a low quasi-equilibrium (i.e., low mortality and low fertility).

Dependency reliance for maintenance of certain groups in a population on other groups; those too young (<15 years) and too old (> 65 years) to earn their own income are considered dependents.

Dependency ratio ratio of the number of dependent people (younger than 15 years and older than 65 years) to the number of economically active people (aged 15–64 years).

Depopulation situation in which there is a significant population decline. This can be due to sub-replacement fertility, high mortality (e.g., war, disease), and/or emigration.

Effectiveness effects or results expected from the policy interventions that are proposed.

Efficiency estimation of the costs and benefits of proposed policy interventions, so as to be able to make optimal use of human and financial resources to obtain the desired results.

Elderly support ratio number of working-age people aged 15–64, divided by the number of persons 65+, indicating levels of potential societal support available for the elderly.

Epidemiological transition shift in the disease pattern of a population, from communicable to non-communicable diseases (NCDs), as a country goes through the demographic transition and develops economically.

Family planning deliberate decision by individuals or couples as to how many children they desire and when to have them. This is put into practice with the use of contraceptive methods, modern or traditional; see *Contraception*.

Family planning programs large-scale endeavors to meet the contraceptive needs of a population and reduce fertility levels. They include program design, information provision, and supplies of commodities and services related to contraception and reproductive health.

Family policy sub-field of social policy dealing with different family-related elements including family creation (e.g., marriage, divorce), child rearing (e.g., education), care-giving (e.g., old age, illness), and economic support (e.g., family subsidies).

Fiscal space room in a government's budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy.

Ideational change modification of social norms, attitudes, and knowledge due to new ideas that spread through society. It can be a component of societal shifts, especially as societies embrace new and different norms and perceptions (e.g., number of children considered desirable).

Infant mortality rate probability of dying between birth and the first birthday (age one exactly), expressed per 1,000 live births.

Information, education, and communication (IEC) combination of approaches to inform and educate individuals, families, and groups on key issues that will empower them to make informed decisions, change behavior in order to obtain positive outcomes, and participate in social transformation; see *Behavior change communication (BCC)*.

Life expectancy at birth total number of years an individual is expected to live given the mortality conditions prevailing at the moment in the particular geographic area. The measure can be calculated for both sexes combined, or for single sexes.

Malthusianism school of thought that emerged from the work of Thomas Robert Malthus (1766–1834), in which unchecked population growth is believed to result in poverty, famine, and death. The theory developed later into neo-Malthusianism, which factored in the use of modern family planning methods. Today, Malthusianism embodies concerns of overpopulation, environmental sustainability, and the earth's carrying capacity.

Malthusian trap situation where rapid demographic growth makes a country incapable to feed its population without outside help. It occurs when: (a) the population exceeds the carrying capacity of the local ecosystem; (b) there is nowhere to migrate to; and (c) there are insufficient exports to exchange for food and other essentials.

Migratory transition long-term migration pattern of a population as it goes through the last stages of the demographic transition. Emigration often occurs as a result of rapid population growth, low rural employment, and low wages.

Mystery client a trained participant who fits the profile of an intended beneficiary (e.g., of a family planning center) and is able to observe services delivery staff, their interaction with clients, and their performance and competence more generally.

Natural increase or decrease rate at which a population increases (or decreases), obtained by the difference between birth rates and death rates without reference to migration.

Overpopulation situation in which the number of people exceeds the carrying capacity of the economy and environment.

Period vs. cohort fertility period fertility rates are calculated for all women of reproductive age for a given period of time, usually one calendar year; cohort analysis calculates fertility rates for generations or age groups, over their lifetime; see *Cohort*.

Policy community network of individuals and organizations concerned with a specific problem (e.g., HIV/AIDS).

Policy lever entry point or instrument to implement a policy.

Policy space support from a government's stakeholders (voters, lobbyists, beneficiaries, employees, political managers, critics, and donors) that enables deployment of resources to agreed groups and purposes.

Polity a particular form or system of government or a structure that is the institutional expression of the state.

Population composition other characteristics of a population than age-sex structure, such as socioeconomic class, ethnic group, education attainment, and religion; see *Age-sex structure*.

Population control process of keeping in check the population growth rate through *ad hoc* policies and programs (the term is not used much since the International Conference on Population and Development held in Cairo in 1994).

Population growth increase (or decrease, also known as negative population growth) in a population's size over time.

Population momentum (also called *demographic momentum*) additional population growth resulting from the age structure. It can be positive if the age structure is young and there are disproportionate numbers of women in childbearing age groups (because of past high fertility). Alternatively, it can be negative when the age structure is old (due to past sub-replacement fertility).

Population monitoring collection of demographic data and study of population trends, perceptions, and policies, at both national and international levels.

Population Movement international efforts since the 1960s toward the creation and funding of family planning programs, with the objective of ensuring that individuals, and especially women, have control over their reproduction.

Population optimum situation in which neither a larger nor a smaller population would yield advantages.

Population paradigm predominant ideas on population issues and their relationship with socioeconomic development.

Population planning establishment by governments of demographic objectives for the future, embedded in a socioeconomic development plan.

Population policy actions taken explicitly or implicitly by public authorities in order to prevent, delay, or address imbalances between demographic changes, on the one hand, and social, economic, and political goals, on the other.

Population pressure stress exerted by a growing population on its environment, whether it is financial, social, geographical, or ecological.

Population program deliberate and direct intervention(s) by a government to influence demographic change, with specific goals and targets.

Population projections use of demographic analysis methodology to estimate future populations by age and sex, based on estimates and assumptions of births, deaths, and migration rates.

Populationism policy that aims to increase population through means other than higher fertility, e.g., through immigration.

Pronatalism policy that aims to increase fertility.

Propinquity proximity or nearness (one to another), which can facilitate exchange of ideas, access to services, and trade in goods and services.

Public demography efforts to reach public audiences with demographic analysis and summaries of research results as well as discuss the meaning of those results and the actions, if any, to be taken by public authorities.

Replacement-level fertility fertility level at which a population is reproducing itself, given the sex ratio at birth and the mortality conditions. A fertility rate of 2.1 children per woman is considered replacement level in developed countries.

Reproductive health functions and processes that determine human reproduction at all stages of life. People should be able to have responsible, gratifying, and safe sex lives, as well as the ability to reproduce if, when, and how often they choose.

Reproductive rights legal rights and freedom relating to human reproduction and reproductive health. It encompasses the right of couples and individuals to decide freely and responsibly the number, spacing, and timing of their children, to have the information and means to do so, and to reach the highest standards of sexual and reproductive health.

Reproductive health services programs that ensure better reproductive health by providing information, counseling, and a choice of contraceptive methods.

Sexual health state of physical, emotional, mental, and social well-being in relation to sexuality. It encompasses more than the absence of disease, and includes positive approaches to sexuality and sexual relationships.

Slum a densely populated urban area marked by crowding, dirty run-down housing, poverty, and social disorganization (also called shantytown).

Sub-replacement fertility fertility level below the replacement level of 2.1 children per woman; see *Replacement-level fertility*.

Sustainable development a way of socioeconomic development that ensures and, if possible, improves the well-being of future generations.

Total abortion rate average number of induced abortions per woman (a measure comparable to the TFR; see *Total fertility rate*).

Total fertility rate average number of live births (children) that would be born to a woman by the time she ended childbearing, if she were to pass through all her childbearing years conforming to the age-specific fertility rates of a given year; see *Age-specific fertility rate*.

Transitional age multiplier index comparing the size of different age groups of a population at the beginning and at the end of the demographic transition.

Transitional multiplier index reflecting the number by which a total population is multiplied between the beginning and the end of the demographic transition.

Transmigration policy of relocating populations, usually within the same country, in order to reduce population pressure in the region(s) of origin (also called voluntary resettlement).

Urbanization demographic and physical growth of urban areas (according to the definition chosen for these areas), caused by natural population increase in urban areas and migration from rural areas to the cities.

Youth bulge situation in which a high proportion (40% or more) of the population is 15–29 years old, relative to the adult population (above age 15); however, other definitions are being used, e.g., proportion of youth (either 15–24 or 15–29) to labor force population (15–64).

References

Abbasi-Shavazi, M. J., McDonald, P., & Hosseini-Chavoshi, M. (2009). *The fertility transition in Iran: Revolution and reproduction*. New York: Springer.

Adepoju, A. (2006). Internal and international migration within Africa. In P. Kok, D. Gelderblom, J. O. Oucho, & J. van Zyl (Eds.), *Migration in South and Southern Africa*. Cape Town: Human Sciences Research Council Press.

Adnan, S. (2002). Dilatation démographique, pression sur les terres et changement social. Une baisse de la fécondité en situation de pauvreté absolue: Le Bangladesh. In J. C. Chasteland & J. C. Chesnais (Eds.), *La population du monde: Géants démographiques et défis internationaux* (2nd ed., pp. 63–106). Paris: Institut national d'études démographiques.

African Development Bank. (2008). *Bank group climate risk management and adaptation strategy* (Approach Paper). See http://siteresources.worldbank.org/INTAFRICA/Resources/CRMA_Strategy_Approach_Paper.pdf. Accessed on August 27, 2010.

Agrawala, S., Ota, T., Ahmed, A. U., Smith, J., & van Aalst, M. (2003). *Development and climate change in Bangladesh: Focus on coastal flooding and Sundarbans*. Paris: Organisation for Economic Co-operation and Development.

Ajomale, O. (2007). *Country report: Ageing in Nigeria – Current state, social and economic implications.* See http://www.rc11-sociology-of-aging.org/system/files/Nigeria.pdf. Accessed on August 24, 2010.

Alba, F., & Potter, J. E. (1986). Population and development in Mexico since 1940: An interpretation. *Population and Development Review, 12*(1), 47–75.

Alexandratos, N. (2005). Countries with rapid population growth and resources constraints: Issues of food, agriculture, and development. *Population and Development Review, 31*(2), 237–258.

Alkire, S., & Santos, M. E. (2010). Ethiopia country briefing. *Oxford poverty & human development initiative (OPHI) multidimensional poverty index country briefing series.* See www.ophi.org.uk/policy/multidimensional-poverty-index/mpi-country-briefings. Accessed on November 12, 2010.

All Party Parliamentary Group on Population, Development and Reproductive Health. (2007). *Return of the population growth factor: Its impact on the Millennium Development Goals*. London: Her Majesty's Stationers Office.

Allman, J., Rohde, J., & Wray, J. (1987). Integration and disintegration: The case of family planning in Haiti. *Health Policy and Planning, 2*(3), 236–244.

Ambrosetti, E. (2011). *Égypte, l'exception démographique*. Paris: Les éditions de l'Ined.

Anand, S., & Sen, A. (1997). *Concepts of human development and poverty: A multidimensional perspective* (Human Development Papers 1997). New York: United Nations Development Programme.

André, C., & Platteau, J. P. (1998). Land relations under unbearable stress: Rwanda caught in the Malthusian trap. *Journal of Economic Behavior and Organization, 34*(1), 1–47.

J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0, © Springer Science+Business Media B.V. 2012

Angeles, G., Guilkey, D. K., & Mroz, T. A. (1998). Purposive program placement and the estimation of family planning program effects in Tanzania. *Journal of the American Statistical Association, 93*(443), 884–899.

Angeles, G., Guilkey, D. K., & Mroz, T. A. (2005a). The determinants of fertility in rural Peru: Program effects in the early years of the national family planning program. *Journal of Population Economics, 18*, 367–389.

Angeles, G., Guilkey, D. K., & Mroz, T. A. (2005b). The effects of education and family planning programs on fertility in Indonesia. *Economic Development and Cultural Change, 54*(1), 165–201.

Anonymous. (1983). Recueil de définitions des politiques démographiques. In *Politiques de Population. Études et Documents* (pp. 63–82). Paris: Departments of Demography of the Universities of Louvain and Montreal & Institut national d'études démographiques.

Arrow, K. J., Panosian, C. B., & Gelband, H. (Eds.). (2004). *Saving lives, buying time: Economics of malaria drugs in an age of resistance*. Washington, DC: Institute of Medicine of the National Academies, Board on Global Health, Committee on the Economics of Antimalarial Drugs.

Asekun-Olarinmoye, E. O., & Amusan, O. A. (2008). The impact of health education on attitudes towards female genital mutilation (FGM) in a rural Nigerian community. *The European Journal of Contraception & Reproductive Health Care, 13*(3), 289–297.

Ashford, L. S. (1995). New perspectives on population: Lessons from Cairo. *Population Bulletin, 50*(1).

Ashford, L. S. (2001). New population policies: Advancing women's health and rights. *Population Bulletin, 56*(1).

Ashford, L. S. (2006). *How HIV and AIDS affect populations*. Washington, DC: Population Reference Bureau (BRIDGE Project).

Attané, I. (2010). *En espérant un fils …: La masculinisation de la population chinoise*. Paris: Les éditions de l'Ined.

Ayad, M., & Barrère, B. (1991). Présentation des enquêtes démographiques et de santé. *Population, 46*(4), 964–975.

Aziz, A. (1994). Proximate determinants of fertility in Pakistan. *The Pakistan Development Review, 33*(4, Part II), 727–742.

Bakewell, O. (2008). *Migration and development: A briefing note for the ACP ministers*. Oxford: University of Oxford, International Migration Institute.

Banerjee, A. V., & Duflo, E. (2011). *Poor economics: A radical rethinking of the way to fight global poverty*. New York: PublicAffairs.

Bapat, M., & Agarwal, I. (2003). Our needs, our priorities; women and men from the slums of Mumbai and Pune talk about their needs for water and sanitation. *Environment and Urbanization, 15*(2), 71–86.

Barbieri, M. (2006). Toward a policy turnaround in low-fertility developing countries? In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and synthesis. A treatise in population studies* (Vol. IV, pp. 129–136). San Diego: Academic Press/Elsevier.

Barnett, T., & Whiteside, A. (2002). *AIDS in the twenty-first century: Disease and globalization*. New York: Palgrave Macmillan.

Baroudi, R. (2010). *KPI mega library: 17,000 key performance indicators*. Scotts Valley: CreateSpace.

Barrientos, A. (2006). *Aging, poverty and public policy in developing countries: New survey evidence*. Paper prepared for presentation at the FISS 13th international research seminar on issues in social security "Social Protection in an Ageing World," Sigtuna, Sweden, June 16–18, 2006. See http://www.eldis.org/vfile/upload/1/document/0708/DOC22602.pdf. Accessed on August 29, 2010.

Barrientos, A., Goram, M., & Heslop, A. (2003). Old age poverty in developing countries: Contributions and dependence in later life. *World Development, 13*(3), 555–570.

Basu, A. M. (2009). Over-demonizing the international population movement. *Population Studies, 63*(2), 187–193.

Baud, I., & Nainan, N. (2008). "Negotiated spaces" for representation in Mumbai: Ward committees, advanced locality management and the politics of middle-class activism. *Environment and Urbanization, 20*(2), 483–499.

Bauer, T. K., Lofstrom, M., & Zimmermann, K. F. (2001). *Immigration policy, assimilation of immigrants and natives' sentiments towards immigrants: Evidence from 12 OECD-Countries* (Centre for Comparative Immigration Studies Working Paper 33). San Diego: University of California-San Diego.

Bélanger, D., & Thi Hai Oanh, K. (2009). Second-trimester abortions and sex-selection of children in Hanoi, Vietnam. *Population Studies, 63*(2), 163–171.

Bella, J. N. (1998). *Les politiques de population dans deux pays en développement: Le Cameroun et la Thaïlande*. Yaoundé: Institut de formation et de recherche démographiques.

Benedict XVI (2010). *Light of the world: The Pope, the church and the signs of the times. A conversation with Peter Seewald*. San Francisco: Ignatius Press.

Benneh, G., Nabila, J. S., & Gyepi-Garbrah, B. (1989). *Twenty years of population policy in Ghana*. Legon: University of Ghana.

Berelson, B. (1969). Beyond family planning. *Studies in Family Planning, 38*, 1–16.

Berelson, B. (1977). Paths to fertility reduction: The 'Policy Cube'. *Family Planning Perspectives, 9*(5), 214–219.

Bhandari, P., & Shrestha, S. S. (2005). *Mass media, gender and contraception in Nepal* (Population Research Institute Working Paper 05-04). University Park: Pennsylvania State University.

Bill & Melinda Gates Foundation. (2011). *2011 annual letter* from *Bill Gates*. Seattle: Bill & Melinda Gates Foundation.

Bilsborrow, R. E. (1987). Population pressure and agricultural development in developing countries: A conceptual framework and recent evidence. *World Development, 15*(2), 183–203.

Birdsall, N. (2001). New findings in economics and demography: Implications for policies to reduce poverty. In N. Birdsall, A. C. Kelley, & S. W. Sinding (Eds.), *Population matters: Demographic change, economic growth, and poverty in the developing world* (pp. 411–417). New York: Oxford University Press.

Birdsall, N., Kelley, A. C., & Sinding, S. W. (Eds.). (2001). *Population matters: Demographic change, economic growth, and poverty in the developing world*. New York: Oxford University Press.

Birdsall, N., Rodrik, D., & Subramanian, A. (2005). How to help poor countries. *Foreign Affairs, 84*(4), 136–152.

Blacker, J., Opiyo, C., Jasseh, M., Sloggett, A., & Ssekamatte-Ssebulila, J. (2005). Fertility in Kenya and Uganda: A comparative study of trends and determinants. *Population Studies, 59*(3), 355–373.

Blanc, A. K., & Tsui, A. O. (2005). The dilemma of past success: Insiders' views on the future of the international family planning movement. *Studies in Family Planning, 36*(4), 263–276.

Blanchet, D. (1991). On interpreting observed relationships between population growth and economic growth: A graphical exposition. *Population and Development Review, 17*(1), 105–114.

Bloom, D. E., Canning, D., & Sevilla, J. (2003). *The demographic dividend: A new perspective on the economic consequences of population change*. Santa Monica: RAND.

Bloom, D. E., Canning, D., Fink, G., & Finlay, J. (2007). *Realizing the demographic dividend: Is Africa any different?* (Program of the Global Demography of Aging Working Paper 23). Cambridge: Harvard University, Harvard Initiative for Global Health.

Bloom, D. E., Canning, D., & Fink, G. (2008). Urbanization and the wealth of nations. *Science, 319*(5864), 772–775.

Bloom, D. E., Canning, D., & Fink, G. (2009). *The graying of global population and its macroeconomic consequences*. Boston: Harvard School of Public Health.

Bodea, C., & Elbadawi, I. A. (2007). *Riots, coups and civil war* (Policy Research Working Paper 4397). Washington, DC: The World Bank.

Bongaarts, J. (1978). A framework for analyzing the proximate determinants of fertility. *Population and Development Review, 4*(1), 105–132.

Bongaarts, J. (1982). The fertility-inhibiting effects of the intermediate fertility variables. *Studies in Family Planning, 13*(6/7), 179–189.

Bongaarts, J. (1994). Population policy options in the developing world. *Science, 263*(5148), 771–776.

Bongaarts, J. (2006). The causes of stalling fertility transitions. *Studies in Family Planning, 37*(1), 1–16.

Bongaarts, J. (2008). Fertility transitions in developing countries: Progress or stagnation? *Studies in Family Planning, 39*(2), 105–110.

Bongaarts, J., & Bulatao, R. A. (Eds.). (2000). *Beyond six billion: Forecasting the world's population*. Washington, DC: National Academic Press, Panel on Population Projections, Committee on Population, Commission on Behavioral and Social Sciences and Education, National Research Council.

Bongaarts, J., & Greenhalgh, S. (1985). An alternative to the one-child policy in China. *Population and Development Review, 11*(4), 585–617.

Bongaarts, J., & Potter, G.R. (1983). *Fertility, biology, and behavior: An analysis of the proximate determinants*. New York: Academic Press.

Bongaarts, J., & Sinding, S. W. (2009). A response to critics of family planning programs. *International Perspectives on Sexual and Reproductive Health, 35*(1), 39–44 (corrected version).

Bornstein, D. (2007). *How to change the world: Social entrepreneurs and the power of new ideas*. Oxford: Oxford University Press.

Borsch-Supan, A., & Chiappori, P. A. (1991). Aging population: Problems and policy options in the US and Germany. *Economic Policy, 6*(12), 104–139.

Boserup, E. (1965). *The conditions of agricultural growth: The economics of agrarian change under population pressure*. Chicago: Aldine.

Boserup, E. (1970). *Woman's role in economic development*. London: Earthscan.

Boserup, E. (1981). *Population and technological change: A study of long-term trends*. Chicago: University of Chicago Press.

Boulay, M., Storey, J. D., & Sood, S. (2002). Indirect exposure to a family planning mass media campaign in Nepal. *Journal of Health Communication, 7*(5), 379–399.

Bourdelais, P. (1993). *Le nouvel âge de la vieillesse: Histoire du vieillissement de la population*. Paris: Éditions Odile Jacob.

Bouvier, L. F., & Bertrand, J. T. (1999). *World population: Challenges for the 21st century*. Santa Ana: Seven Locks Press.

Bremner, J., Frost, A., Haub, C., Mather, M., Ringheim, K., & Zuehlke, E. (2010). World population highlights: Key findings from PRB's 2010 world population data sheet. *Population Bulletin, 65*(2).

Bristol, N. (2008). Mechai Viravaidya: Thailand's "Condom King". *The Lancet, 371*(9607), 109.

Brockerhoff, M. P. (2000). An urbanizing world. *Population Bulletin, 55*(3).

Brown, G. F. (2007). Tunisia: The debut of family planning. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 59–69). Washington, DC: The World Bank.

Brown, L. R., Gardner, G., & Halweil, B. (2000). *Beyond Malthus: Nineteen dimensions of the population challenge*. New York: W.W. Norton & Company.

Bruquetas-Callejo, M., Garcés-Mascareñas, B., Penninx, R., & Scholten, P. (n.d.). *Policymaking related to immigration and integration. The Dutch case* (IMISCOE Working Paper: Country Report, Working Paper 15). Amsterdam: IMISCOE.

Bryant, L., Carver, L., Butler, C. D., & Anage, A. (2009). Climate change and family planning: Least developed countries define the agenda. *Bulletin of the World Health Organization, 87*(11), 852–857.

Bulatao, R. A. (1984). *Reducing fertility in developing countries: A review of determinants and policy levers* (World Bank Staff Working Papers 680). Washington, DC: The World Bank.

Burra, S. (2005). Towards a pro-poor framework for slum upgrading in Mumbai, India. *Environment and Urbanization, 17*(1), 67–88.

Butz, W. P. (2006). *The double divide: Implosionists and explosionists endanger progress since Cairo*. Washington, DC: Population Reference Bureau. See www.prb.org. Accessed on July 6, 2006.

Cai, Y. (2010). China's below-replacement fertility: Government policy or socioeconomic development? *Population and Development Review, 36*(3), 419–440.

Caldwell, J. C. (1982). The wealth flows theory of fertility decline. In C. Höhn & R. Mackensen (Eds.), *Determinants of fertility trends: Theories re-examined* (pp. 169–188). Liege: Ordina Éditions.

Caldwell, J. C. (2003a). History of demography. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 216–221). New York: Macmillan Reference USA.

Caldwell, J. C. (2003b). Population organizations. Professional associations. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 742–744). New York: Macmillan Reference USA.

Caldwell, C. (2009). *Reflections on the revolution in Europe: Immigration, Islam, and the West*. New York: Doubleday.

Caldwell, J. C., & Caldwell, P. (1988). Is the Asian family planning program model suited to Africa? *Studies in Family Planning, 19*(1), 19–28.

Caldwell, J. C., & Sai, F. T. (2007). Family planning in Ghana. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 379–391). Washington, DC: The World Bank.

Caldwell, J. C., Caldwell, P., & McDonald, P. (2002). Policy responses to low fertility and it consequences: A global survey. *Journal of Population Research, 19*(1), 1–24.

Cali, M. (2008). *Urbanisation, inequality and economic growth: Evidence from Indian states and towns* (Background Note for the World Development Report 2009). London: Overseas Development Institute.

Calot, G., & Sardon, J. P. (1999). Les facteurs du vieillissement démographique. *Population, 54*(3), 509–552.

Cameron, L., & Cobb-Clark, D. (2002). *Old age support in developing countries: Labour supply, intergenerational transfers and living arrangements*. Melbourne, AU: University of Melbourne. See http://econrsss.anu.edu.au/~dcclark/docs/papers/indo_draft19.pdf. Accessed on August 12, 2010.

Campbell, M., Sahin-Hodoglugil, N. N., & Potts, M. (2006). Barriers to fertility regulation: A review of the literature. *Studies in Family Planning, 37*(2), 87–98.

Campbell White, A., Merrick, T. W., & Yazbeck, A. S. (2006). *Reproductive health. The missing Millennium Development Goal: Poverty, health, and development in a changing world*. Washington, DC: The World Bank.

Caselli, G., Vallin, J., & Wunsch, G. (Eds.). (2006). *Demography: Analysis and synthesis. A treatise in population studies*. San Diego: Academic Press/Elsevier. 4 vol.

Castles, S. (2006). *Comparing the experience of five major emigration countries* (International Migration Institute Working Paper 7). Oxford: University of Oxford.

Castles, S. (2007). *Back to the future? Can Europe meet its labour needs through temporary migration?* (International Migration Institute Working Paper 1). Oxford: University of Oxford.

Catholics for Choice. (2008). *Truth and consequence: A look behind the Vatican's Ban on contraception*. Washington, DC: Catholics for Choice.

Central Statistical Agency & ORC Macro. (2006). *Ethiopia demographic and health survey 2005*. Addis Ababa/Calverton: Federal Democratic Republic of Ethiopia & ORC Macro.

Chamie, J. (2003). Population organizations. United Nations system. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 749–752). New York: Macmillan Reference USA.

Charbit, Y. (2009). *Economic, social and demographic thought in the XIXth century: The population debate from Malthus to Marx*. New York: Springer.

Chasteland, J. C. (1989). Les politiques de population: Objectifs, moyens et définitions. *Politiques de Population. Études et Documents, 3*(4).

Chasteland, J. C. (2002). De 1950 à 2000: La communauté internationale face au problème de la croissance de la population mondiale. In J. C. Chasteland & J. C. Chesnais (Eds.), *La population du monde: Géants démographiques et défis internationaux* (2nd ed., pp. 717–753). Paris: Institut national d'études démographiques.

Chasteland, J. C. (2006). World population growth and the international community from 1950 to the present day. In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and*

synthesis. A treatise in population studies (Vol. IV, pp. 457–486). San Diego: Academic Press/Elsevier.

Chasteland, J. C., & Chesnais, J. C. (Eds.). (2002). *La population du monde: Géants démographiques et défis internationaux* (2nd ed.). Paris: Institut national d'études démographiques.

Chawla, M., Betcherman, G., & Banerji, A. (2007). *From red to gray: The "Third Transition" of aging populations on Eastern Europe and the former Soviet Union*. Washington, DC: The World Bank.

Chesnais, J. C. (1979a). L'effet multiplicatif de la transition démographique. *Population, 34*(6), 1138–1144.

Chesnais, J. C. (1979b). Un cas de sextuplement en cinquante ans: La population du Kenya. *Population, 34*(1), 206–211.

Chesnais, J. C. (1990). Demographic transition patterns and their impact on the age structure. *Population and Development Review, 16*(2), 327–336.

Chesnais, J. C. (1992). *The demographic transition. Stages, patterns, and economic implications. A longitudinal study of sixty-seven countries covering the period 1720–1984*. Oxford: Clarendon.

Chesnais, J. C. (1995). *Le crépuscule de l'Occident. Dénatalité, condition des femmes et immigration*. Paris: Robert Laffont.

Chesnais, J. C. (1996). Fertility, family, and social policy in contemporary Western Europe. *Population and Development Review, 22*(4), 729–739.

Chesnais, J. C. (1999). L'immigration et le peuplement des États-Unis. *Population, 54*(4–5), 611–634.

Chesnais, J. C. (2001). Comment: A March toward population recession. In R. A. Bulatao & J. B. Casterline (Eds.), *Global fertility transition*. New York: The Population Council. *Population and Development Review* Supplement to Vol. 27, 255–259.

Chesnais, J. C. (2002). L'inversion de la pyramide des âges, ses variantes et les politiques nécessaires. In *Vivre plus longtemps, avoir moins d'enfants, quelles implications?* Association Internationale des Démographes de Langue Française, Actes du colloque de Byblos, 2000 (pp. 659–670). Paris: Presses Universitaires de France.

Chesnais, J. C. (2006). Population policy in France, 1896–2003. In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and synthesis. A treatise in population studies* (Vol. IV, pp. 435–455). San Diego: Academic Press/Elsevier.

Chimbwete, C., Watkins, S. C., & Zulu, E. M. (2005). The evolution of population policies in Kenya and Malawi. *Population Research and Policy Review, 24*, 85–106.

Chiwara, L., & Karadenizli, M. (2008). Mapping aid effectiveness and gender equality: Global findings and key messages. In *Gender matters*. New York: United Nations Development Fund for Women.

Chung, W., & Das Gupta, M. (2007). The decline of son preference in South Korea: The roles of development and public policy. *Population and Development Review, 33*(4), 757–783.

Cincotta, R. P., Engelman, R., & Anastasion, D. (2003). *The security demographic: Population and civil conflict after the cold war*. Washington, DC: Population Action International.

Cleaver, K. M., & Schreiber, G. A. (1994). *Reversing the spiral: The population, agriculture, and environment Nexus in Sub-Saharan Africa*. Washington, DC: The World Bank.

Cleland, J. (2003). Mortality-fertility relationships. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 668–672). New York: Macmillan Reference USA.

Cleland, J., & Mauldin, W. P. (1991). The promotion of family planning by financial payments: The case of Bangladesh. *Studies in Family Planning, 22*(1), 1–18.

Cleland, J., & Sinding, S. (2005). What would Malthus say about AIDS in Africa? *The Lancet, 366*(9500), 1899–1901.

Cleland, J., & Verma, V. (1989). The world fertility survey: An appraisal of methodology. *Journal of the American Statistical Association, 84*(407), 756–767.

Cleland, J., & Wilson, C. (1987). Demand theories of the fertility transition: An iconoclastic view. *Population Studies, 41*(1), 5–30.

Cleland, J., Phillips, J. F., Amin, S., & Kamal, G. M. (1994). *The determinants of reproductive change in Bangladesh: Success in a challenging environment*. Washington, DC: The World Bank.

Cleland, J. G., Ndugwa, R. P., & Zulu, E. M. (2011). Family planning in sub-Saharan Africa: Progress or stagnation? *Bulletin of the World Health Organization, 89*(2), 137–143.
Coale, A. J. (1973). The demographic transition. In *Proceedings of the international population conference*, Liège, 1973 (Vol. 1, pp. 53–72). Liège: International Union for the Scientific Study of Population.
Coale, A. J., & Hoover, E. M. (1958). *Population growth and economic development in low-income countries: A case study of India's prospects*. Princeton: Princeton University Press.
Coale, A. J., & Watkins, S. C. (Eds.). (1986). *The decline of fertility in Europe: The revised proceedings of a conference on the Princeton European fertility project*. Princeton: Princeton University Press.
Coleman, D. (2006). Immigration and ethnic change in low-fertility countries: A third demographic transition. *Population and Development Review, 32*(3), 401–446.
Coleman, S. (1983). *Family planning in Japanese society: Traditional birth control in a modern urban culture*. Princeton: Princeton University Press.
Collier, P., Elliot, L., Hegre, H., Hoeffler, A., Reynol-Querol, M., & Sambanis, N. (2003). *Breaking the conflict trap: Civil war and development policy*. Washington, DC: The World Bank/Oxford University Press.
Collomb, P. (1999). *Une voie étroite pour la sécurité alimentaire d'ici à 2050*. Rome/Paris: Food and Agriculture Organization & Economica.
Connelly, M. J. (2006). Population control in India: Prologue to the emergency period. *Population and Development Review, 32*(4), 629–667.
Connelly, M. J. (2008). *Fatal misconception: The struggle to control world population*. Cambridge/London: The Belknap Press of Harvard University Press.
Cook, R. J. (2003). Reproductive rights. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 846–848). New York: Macmillan Reference USA.
Cosio-Zavala, M. E. (1994). *Changements de fécondité au Mexique et politiques de population*. Paris: Éditions L'Harmattan/Éditions de l'Institut des hautes études de l'Amérique latine.
Cosio-Zavala, M. E. (2006). Population policies in Mexico. In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and synthesis. A treatise in population studies* (Vol. IV, pp. 335–347). San Diego: Academic Press/Elsevier.
Cotlear, D. (Ed.). (2011). *Population aging: Is Latin America ready?* Washington, DC: The World Bank.
Cramer, C. (2006). *Civil war is not a stupid thing: Accounting for violence in developing countries*. London: Hurst & Company.
Crossette, B. (2005). Reproductive health and the Millennium Development Goals: The missing link. *Studies in Family Planning, 36*(1), 71–79.
D'Agnes, T. (2001). *From condoms to cabbages: An authorized biography of Mechai Viravaidya*. Bangkok: Post Books.
D'Haem, J., & Dirie, W. (2003). *Desert dawn*. London: Virago Press.
Das Gupta, M., Chung, W., & Shuzhuo, L. (2009). Evidence for an incipient decline in numbers of missing girls in China and India. *Population and Development Review, 35*(2), 401–416.
Das Gupta, M., Bongaarts, J., & Cleland, J. (2011). *Population, poverty, and sustainable development: A review of the evidence* (Policy Research Working Paper 5719). Washington, DC: The World Bank, Development Research Group, Human Development and Public Services Team.
David, H. P., Morgall, J. M., Osler, M., Rasmussen, N. K., & Jensen, B. (1990). United States and Denmark: Different approaches to health care and family planning. *Studies in Family Planning, 21*(1), 1–19.
Davis, K. (1963). The theory of change and response in modern demographic history. *Population Index, 29*(4), 345–366.
de Condorcet, M. (1995). Condorcet on human progress. *Population and Development Review, 21*(1), 153–161.
de Soto, H. (2000). *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. New York: Basic Books.

De Souza, R. M., Williams, J. S., & Meyerson, F. A. B. (2003). Critical links: Population, health, and the environment. *Population Bulletin, 58*(3).

Deaton, A. (2009). The World Development Report at thirty: A birthday tribute or a funeral elegy? In S. Yusuf (Ed.), *Development economics through the decades: A critical look at thirty years of the world development report* (pp. 105–114). Washington, DC: The World Bank.

DeJong, J. (2000). The role and limitations of the Cairo international conference on population and development. *Social Science and Medicine, 51*(6), 941–953.

Demeny, P. (1986). Population and the invisible hand. *Demography, 23*(4), 473–487.

Demeny, P. (1992). Policies seeking a reduction of high fertility: A case for the demand side. *Population and Development Review, 18*(2), 321–332.

Demeny, P. (2003a). Population policy. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 752–763). New York: Macmillan Reference USA.

Demeny, P. (2003b). Population policy dilemmas in Europe at the dawn of the twenty-first century. *Population and Development Review, 29*(1), 1–28.

Demeny, P. (2011). Population policy and the demographic transition: Performance, prospects, and options. In R. D. Lee & D. S. Reher (Eds.), *Demographic transition and its consequences*. New York: The Population Council. *Population and Development Review*, Supplement to Vol. 37, 249–274.

Demeny, P., & McNicoll, G. (Eds.). (2003). *The encyclopedia of population*. New York: Macmillan Reference USA. 2 vol.

Diamond, J. M. (2005). *Collapse: How societies choose to fail or succeed*. New York: Viking Penguin.

Dickens, B. M. (2003). Reproductive technologies. Ethical issues. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 852–854). New York: Macmillan Reference USA.

Dirie, W., & Miller, C. (1999). *Desert flower: The extraordinary journey of a desert nomad*. New York: Harper Perennial.

Dixon-Mueller, R. (1993). *Population policy & women's rights: Transforming reproductive choice*. Westport/London: Praeger.

Dobra, A. (2009). *Principal concerns concentrating on the costs and benefits of immigration in developed countries* (MPRA Paper 16817). Munich: Munich Personal RePEc Archive.

Doctor, H. V., & Bawah, A. A. (2005). *Has the Navrongo project in Northern Ghana been successful in altering preferences?* Paper prepared for presentation at the XXV international conference for the scientific study of population, Tours, France, July 18–23, 2005.

Donaldson, P. J. (1990). *Nature against Us: The United States and the world population crisis, 1965–1980*. Chapel Hill/London: University of North Carolina Press.

Donaldson, P. J. (2002). The elimination of contraceptive acceptor targets and the evolution of population policy in India. *Population Studies, 56*(1), 97–110.

Donaldson, P. J. (2011). *Toward an engaged public demography* (Occasional Paper). Washington, DC: Population Reference Bureau.

Donaldson, P. J., & Tsui, A. O. (1990). The international family planning movement. *Population Bulletin, 45*(3).

Dorbritz, J., & Fleischhacker, J. (1999). The former German democratic republic. In H. P. David (Ed.), *From abortion to contraception: A resource to public policies and reproductive behavior in Central and Eastern Europe from 1917 to the present* (pp. 121–143). Westport: Greenwood Press.

Dorius, S. F. (2008). Global demographic convergence? A reconsideration of changing intercountry inequality in fertility. *Population and Development Review, 34*(3), 519–537.

Duffield, M. (2005). *Human security: Linking development and security in an age of terror*. Paper prepared for the GDI Panel 'New Interfaces between Security and Development', 11th conference of the EADI, Bonn, September 21–24, 2005. See http://eadi.org/gc2005/confweb/papersps/Mark_Duffield.pdf. Accessed on August 12, 2010.

Dumont, A. (1990). *Dépopulation et civilization: Étude démographique*. Paris: Economica (reprint of the 1890 edit.).

Dyson, T. (2010). *Population and development: The demographic transition*. London/New York: Zed Books.
Eager, P. W. (2004). *Global population policy: From population control to reproductive rights*. Hants/Burlington: Ashgate Publishing Limited.
Easterly, W. R. (2001). *The elusive quest for growth: Economists' adventures and misadventures in the tropics*. Cambridge/London: The Massachusetts Institute of Technology Press.
Eastwood, R., & Lipton, M. (2011). Demographic transition in sub-Saharan Africa: How big will the economic dividend be? *Population Studies, 65*(1), 9–35.
Eberstadt, N. (2007). "Demographic Exceptionalism" in the United States: Tendencies and implications. *Agir Revue générale de stratégie (L'engrenage démographique), 29*, 125–136.
Ehrlich, P. R. (1968). *The population bomb*. New York: Ballantine Books.
Ehrlich, P. R., & Ehrlich, A. H. (1990). *The population explosion*. London: Hutchinson.
Ehrlich, P. R., & Ehrlich, A. H. (2004). *One with Nineveh: Politics, consumption, and the human future*. Washington, DC: Island Press.
Eiji, T. (2002). *Inside GHQ: The allied occupation of Japan and its legacy*. New York: Continuum.
Engel, J. (2006). *The epidemic: A global history of AIDS*. New York: Collins.
England, P. (2003). Feminist perspectives on population issues. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 399–403). New York: Macmillan Reference USA.
Engleman, R. (2008). *More: Population, nature, and what women want*. Washington, DC: Island Press.
European Commission. (2005). *Confronting demographic change: A new solidarity between the generations* (Green Paper). Brussels: European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities.
Faruqee, H., & Mühleisen, M. (2001). *Population aging in Japan: Demographic shock and fiscal sustainability* (IMF Working Paper WP/01/40). Washington, DC: International Monetary Fund.
Feeney, G. (2003). Momentum of population growth. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 646–649). New York: Macmillan Reference USA.
Feshbach, M. (2003). *Russia's health and demographic crises: Policy implications and consequences*. Washington, DC: The Chemical and Biological Arms Control Institute.
Fifield, A. (2006, July 8/9). Korea's Childminder. *Financial Times* (US Edit.).
Finkle, J. L., & Crane, B. B. (1975). The politics of Bucharest: Population, development and the new international economic order. *Population and Development Review, 1*(1), 87–114.
Finkle, J. L., & Crane, B. B. (1985). Ideology and politics at Mexico City: The United States at the 1984 international conference on population. *Population and Development Review, 11*(1), 1–28.
Finkle, J. L., & Crane, B. B. (1990). The politics of international population policy. In *International transmission of population policy experience. Proceedings of the expert group meeting on the International Transmission of Population Policy Experience,* New York, June 27–30, 1988 (pp. 167–182). New York: United Nations, Department of International Economic and Social Affairs.
Finkle, J. L., & McIntosh, C. A. (Eds.). (1994). The new politics of population: Conflict and consensus in family planning. *Population and Development Review*, Supplement to Vol. 20.
Finkle, J. L., & McIntosh, C. A. (2002). United Nations population conferences: Shaping the policy agenda for the twenty-first century. *Studies in Family Planning, 33*(1), 11–23.
Francome, C., & Vekemans, M. (2007). *Abortion: A worldwide perspective*. London: Middlesex University Press.
Frank, O., & McNicoll, G. (1987). An interpretation of fertility and population policy in Kenya. *Population and Development Review, 13*(2), 209–243.
Frey, R. G. (2003). Euthanasia. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 323–325). New York: Macmillan Reference USA.
Gardner, J. F. (1998). *Family and familia in Roman law and life*. Oxford: Clarendon.

Garenne, M. (1997). Les politiques de santé publique et leur incidence démographique. In *Démographie: Analyse et synthèse. Causes et conséquences des évolutions démographiques, Actes du séminaire international de Sienne (Pontignano), 22–24 avril 1996* (Vol. 3, pp. 237–269). Paris: Centre Population & Développement.

Garrow, D. J. (1994). *Liberty and sexuality: The right to privacy and the making of Roe v. Wade*. New York: Macmillan Publishing Company.

Gauthier, A. H. (1996). *The state and the family: A comparative analysis of family policies in industrialized countries*. Oxford: Clarendon.

Gauthier, A. H. (2003). Family allowances. In P. Demency & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 350–352). New York: Macmillan Reference USA.

Gavrilov, L. A., & Heuveline, P. (2003). Aging of population. In P. Demency & P. Demency (Eds.), *The encyclopedia of population* (Vol. 1, pp. 32–37). New York: Macmillan Reference USA.

Gendreau, F., Kikhela, D. N., & Guérin, V. (Eds.). (1994). *L'évaluation des politiques et programmes de population. Journées scientifiques du réseau démographie de l'UREF (université des réseaux d'expression française), Bangui, 2–4 juin 1993*. Paris: Éditions John Libbey Eurotext.

Gérard, H. (1983). Politique de population: À la recherche du sens perdu ou à donner. *Études et documents du CIACO, 1*, 9–27.

Gillespie, D., Maguire, E. S., Neuse, M., Sinding, S. W., & Speidel, J. J. (2009). International family-planning budgets in the "new US" era. *The Lancet, 373*(9674), 1505–1507.

Gladwell, M. (2000, March 13). John Rock's error. *The New Yorker*, 52–63.

Glaeser, E. (2011). *Triumph of the city: How our greatest invention makes us richer, smarter, greener, healthier, and happier*. New York: The Penguin Press.

Glass, D. V. (1936). *The struggle for population*. Oxford: Clarendon.

Glass, D. V. (1967). *Population policies and movements in Europe*. London: Frank Cass and Company Limited (reprint of 1940 edit.).

Global Health Council. (2004). *Banking on reproductive health: The World Bank's support for population, the Cairo agenda and the Millennium Development Goals*. Washington, DC: Global Health Council.

Goldberg, M. (2009). *The means of reproduction: Sex, power, and the future of the world*. New York: The Penguin Press.

Goldin, I., Cameron, G., & Balarajan, M. (2011). *Exceptional people: How migration shaped our world and will define our future*. Princeton/Oxford: Princeton University Press.

Goodfield, J. (1991). *A chance to live*. New York: Macmillan Publishing Company.

Goodkind, D. M. (1995). Vietnam's one-or-two-child policy in action. *Population and Development Review, 21*(1), 85–111.

Gourbin, C. M., & Wunsch, G. J. (2001). Hospitalization rates for Alzheimer's disease. *Archives of Public Health, 59*(1), 29–42.

Government Offices of Sweden. (2009). *Family policy in Sweden*. Stockholm: Ministry of Health and Social Affairs. See http://www.sweden.gov.se/sb/d/3827/a/129894. Accessed on May 30, 2010.

Grant, J., Hoorens, S., Sivadasan, S., van het Loo, M., DaVanzo, J., Hale, L., Gibson, S., & Butz, W. P. (2004). *Low fertility and population aging: Causes, consequences, and policy options*. Santa Monica: RAND Europe.

Grass, G. (1982). *Headbirths or the Germans are dying out*. New York: Harcourt Brace Jovanovich.

Greene, M. E. (2008). Poor health, poor women: How reproductive health affects poverty. *Focus on population, environment and security* (Issue 6). Washington, DC: The Environmental Change and Security Program.

Greene, M. E., & Merrick, T. W. (2005). *Poverty reduction: Does reproductive health matter?* (HNP Discussion Paper). Washington, DC: The World Bank.

Greenhalgh, S. (2005). Missile science, population science: The origins of China's one-child policy. *China Quarterly, 182*, 253–276.

Greenhalgh, S., & Winckler, E. A. (2005). *Governing'China's population. From Leninist to neoliberal biopolitics*. Stanford: Stanford University Press.

Grémion, C., & Touzard, H. (2006). *L'Église et la contraception: l'Urgence d'un changement*. Paris: Bayard.

Gribble, J. (2010). *Investing in youth for national development* (Policy Brief January 2010). Washington, DC: Population Reference Bureau.

Gu, B., Wang, F., Guo, Z., & Zhang, E. (2007). China's local and national fertility policies at the end of the twentieth century. *Population and Development Review, 33*(1), 129–147.

Gubhaju, B. (2009). Barriers to sustained use of contraception in Nepal: Quality of care, socioeconomic status, and method-related factors. *Biodemography and Social Biology, 55*(1), 52–70.

Gubry, P. (1988). Cameroun: D'un natalisme nuancé vers un anti-natalisme modéré? *Cahiers des Sciences Humaines, 24*(2), 185–198.

Guengant, J. P. (2002). "Revolution" in the field of population projections. *CICRED Newsletter, 6*(December), 9–12.

Guengant, J. P. (2011). *Comment bénéficier du dividende démographique? La démographie au centre des trajectoires de développement: Synthèse des études réalisées dans les pays de l'UEMOA, ainsi qu'au Ghana, en Guinée, en Mauritanie et au Nigéria.* Paris: Agence française de développement & Institut de recherche pour le développement.

Guengant, J. -P., & May, J. F. (2002). Impact of the proximate determinants on the future course of fertility in sub-Saharan Africa [Special issue 2002]. *Population Bulletin of the United Nations* 46/47, 71–95.

Guiraudon, V. (2000). European integration and migration policy: Vertical policy-making as venue-shopping. *Journal of Common Market Studies, 38*(2), 251–271.

Haaga, J. (2003). Population organizations. Research institutions. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 744–748). New York: Macmillan Reference USA.

Halfon, S. (2007). *The Cairo consensus: Demographic surveys, women's empowerment, and regime change in population policy*. Lanham: Lexington Books.

Halila, S., Belmaker, R. H., Rabia, Y. A., Froimovici, M., & Applebaum, J. (2009). Disappearance of female genital mutilation from the Bedouin population of Southern Israel. *The Journal of Sexual Medicine, 6*, 70–73.

Hanushek, E. (2008). Schooling, gender equity and economic outcomes. In M. Tembon & L. Fort (Eds.), *Girls' education in the 21st century: Gender equality, empowerment and economic growth* (pp. 23–39). Washington, DC: The World Bank.

Hardee, K., Feranil, I., Boezwinkle, J., & Clark, B. (2004a). *The policy circle: A framework for analyzing the components of family planning, reproductive health, maternal health, and HIV/AIDS policies*. (POLICY Working Paper Series 11). Washington, DC: The Futures Group International.

Hardee, K., Xie, Z., & Gu, B. (2004b). Family planning and women's lives in rural China. *International Family Planning Perspectives, 30*(2), 68–76.

Hardee-Cleaveland, K., & Banister, J. (1988). Fertility policy and implementation in China, 1986–1988. *Population and Development Review, 14*(2), 245–286.

Hardin, G. (1968). The tragedy of the commons. *Science, 162*(3859), 1243–1248.

Harkavy, O. (1995). *Curbing population growth: An insider's perspective on the population movement*. New York: Plenum Press.

Harkavy, O., & Roy, K. (2007). Emergence of the Indian national family planning program. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 301–323). Washington, DC: The World Bank.

Hartmann, B. (1995). *Reproductive rights and wrongs: The global politics of population control and contraceptive choice* (Rev. ed.). Boston: South End Press.

Haslegrave, M., & Bernstein, S. (2005). ICPD goals: Essential to the Millennium Development Goals. *Reproductive Health Matters, 13*(25), 106–108.

Haub, C. (2006). Population policy in the United States. In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and synthesis. A treatise in population studies* (pp. 395–406). San Diego: Academic Press/Elsevier.

Haub, C. (2008). *Global aging and the demographic divide*. Washington, DC: Population Reference Bureau.

Haub, C., & Sharma, O. P. (2006). India's population reality: Reconciling change and tradition. *Population Bulletin, 61*(3).

Hazell, P., Poulton, C., Wiggins, S., & Dorward, A. (2007). *The future of small farms for poverty reduction and growth* (Discussion Paper 42). Washington, DC: International Food Policy Research Institute.

Hecht, J. (1988). French Utopian socialists and the population question: "Seeking the Future City." In M. S. Teitelbaum & J. M. Winter (Eds.), *Population and resources in Western intellectual traditions*. New York: The Population Council. *Population and Development Review,* Supplement to Vol. 14, 49–73.

Heckel, N. I. (1986). Population laws and policies in sub-Saharan Africa: 1975–1985. *International Family Planning Perspectives, 12*(4), 122–124.

Heisel, D. F. (2007). Family planning in Kenya in the 1960s and 1970s. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 393–417). Washington, DC: The World Bank.

Heller, P. (2005). Fiscal space: What it is and how to get it. *Finance and Development, 42*(2), 32–33.

Helpage International. (2007). Social cash transfers for Asia: Ensuring social protection/social pensions in old age in the context of rapid ageing. *Intergovernmental seminar report, United Nations Conference Centre, Bangkok, Thailand,* January 29–30, 2007. Bangkok: Helpage International.

Henderson, V. (2000). *The effects of urban concentration on economic growth* (Working Paper 7503). Cambridge: National Bureau of Economic Research.

Henshaw, S. K. (2003). Induced abortion. Prevalence. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 529–531). New York: Macmillan Reference USA.

Henshaw, S. K., Singh, S., & Haas, T. (1999a). Recent trends in abortion rates worldwide. *International Family Planning Perspectives, 25*(1), 44–48.

Henshaw, S. K., Singh, S., & Haas, T. (1999b). The incidence of abortion worldwide. *International Family Planning Perspectives, 25*(Suppl), S30–S38.

Hill, L. E., & Hayes, J. M. (2007). California's out-of-school immigrant youth: A vulnerable minority. *Research brief* (Issue 117), April 2007. San Francisco: Public Policy Institute of California.

Hill, K., AbouZahr, C., & Wardlaw, T. (2001). Estimates of maternal mortality for 1995. *Bulletin of the World Health Organization, 79*(3), 182–193.

Himes, C. L. (2002). Elderly Americans. *Population Bulletin, 54*(2).

Hirschman, C. (2003). Socioeconomic determinants of fertility transition. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 425–431). New York: Macmillan Reference USA.

Hoang, T., Phan, T., & Huynh, T. (2008). Second trimester abortion in Viet Nam: Changing to recommended methods and improving service delivery. *Reproductive Health Matters, 16*(31 Suppl), 145–150.

Hodgson, D. (1983). Demography as social science and policy science. *Population and Development Review, 9*, 1–34.

Hodgson, D. (2009). Abortion, family planning, and population policy: Prospects for the common-ground approach. *Population and Development Review, 35*(3), 479–518.

Hodgson, D., & Watkins, S. C. (1997). Feminists and neo-Malthusians: Past and present alliances. *Population and Development Review, 23*(3), 469–523.

Hoem, B., & Hoem, J. (1996). Sweden's family policies and roller coaster fertility. *Journal of Population Problems, 52–3*(4), 1–22.

Hogan, M. C., Foreman, K. J., Naghavi, M., Ahn, S. Y., Wang, M., Makela, S. M., Lopez, A. D., Lozano, R., & Murray, C. J. L. (2010). Maternal mortality for 181 countries, 1980–2008: A systematic analysis of progress towards Millennium Development Goal 5. *The Lancet, 375*(9726), 1609–1623.

Hugo, G. (2003). Resettlement. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 854–857). New York: Macmillan Reference USA.

Hull, T. H. (2007). Formative years of family planning in Indonesia. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 235–256). Washington, DC: The World Bank.

Husock, H. (2009). Slums of hope. *City Journal 19*(1). See http://www.city-journal.org/2009/19_1_slums.html. Accessed on March 8, 2011.

Hvistendahl, M. (2011). *Unnatural selection: Choosing boys over girls, and the consequences of a world full of men*. New York: Public Affairs.

Hyden, G. (1990). Local governance and economic-demographic transition in rural Africa. In G. McNicoll & M. Cain (Eds.), *Rural development and population: Institutions and policy.* New York : The Population Council. *Population and Development Review,* Supplement to Vol. 15, 193–211.

Ibrahim, S. E., & Ibrahim, B. L. (1998). Egypt's population policy: The long March of state and civil society. In A. Jain (Ed.), *Do population policies matter? Fertility and politics in Egypt, India, Kenya, and Mexico* (pp. 19–52). New York: The Population Council.

International Labour Organisation. (2004). Youth unemployment at an all time high. *World of Work Magazine 52*. Geneva: International Labour Organization.

Iskander, N. (2010). *Creative state: Forty years of migration and development policy in Morocco and Mexico*. Ithaca: Cornell University Press.

Jack, A. (2010, October 5). IVF pioneer wins Nobel Prize for medicine. *Financial Times* (US Edit.).

Jacobsen, L. A., Kent, M., Lee, M., & Mather, M. (2011). America's aging population. *Population Bulletin, 66*(1).

Jacobstein, R., Bakamjian, L., Pile, J. M., & Wickstrom, J. (2009). Fragile, threatened, and still urgently needed: Family planning programs in sub-Saharan Africa. *Studies in Family Planning, 40*(2), 147–154.

Jain, A. (Ed.). (1998). *Do population policies matter? Fertility and politics in Egypt, India, Kenya, and Mexico*. New York: The Population Council.

Jiang, L., & Hardee, K. (2010). How do recent population trends matter to climate change? *Population Research and Policy Review.* August 24 online. doi: 10.1007/511113-010-9189-7.

Johansson, S. R. (1991). Implicit policy and fertility during development. *Population and Development Review, 17*(3), 377–414.

Johansson, A., Tuyet, L. T. N., Lap, N. T., & Sundström, K. (1996). Abortion in context: Women's experience in two villages in Thai Binh province, Vietnam. *International Family Planning Perspectives, 22*(3), 103–107.

Joshi, S. (forthcoming). *How effective are family-planning programs at improving the lives of women? Some perspectives from a vast literature*. Unpublished paper.

Joshi, S., & Schultz, T. P. (2005). *Evaluating the long-term consequences of a family planning program interventions for women and their children in matlab, Bangladesh*. New Haven: Yale University.

Joshi, S., & Schultz, T. P. (2007). *Family planning as an investment in development: Evaluation of a program's consequences in Matlab, Bangladesh* (Discussion Paper 951). New Haven: Yale University Economic Growth Center.

Kandji, S. T., Verchot, L., & Mackensen, J. (2006). *Climate change and variability in the Sahel region: Impacts and adaptation strategies in the agricultural sector*. Nairobi: United Nations Environment Programme & ICRAF.

Kantner, J. F., & Kantner, A. (2006). *The struggle for international consensus on population and development*. New York: Palgrave Macmillan.

Kaplan, R. D. (2000). *The coming anarchy: Shattering the dreams of the post cold war*. New York: Random House.

Karshenas, M. (2001). Agriculture and economic development in SSA and Asia. *Cambridge Journal of Economics, 25*, 315–342.

Kates, J., Wilson, A., & Summers, T. (2004). The global impact of HIV/AIDS on youth. *HIV/AIDS policy fact sheet*. Washington, DC: The Henry J. Kaiser Family Foundation.

Keely, C. B. (2009). Replacement migration. In P. Uhlenberg (Ed.), *International handbook of population aging* (pp. 395–403). New York: Springer.

Keen, D. (2002). '*Since I am Dog, Beware My Fangs': Beyond the 'Rational Violence' framework in the Sierra Leonean War* (Development Research Centre Working Paper 14). London: Crisis States Programme, London School of Economics.

Kelley, A. (1988). Economic consequences of population change in the third world. *Journal of Economic Literature, 26*(4), 1685–1728.

Kelley, A. C., & Nobbe, C. E. (1990). *Kenya at the demographic turning point? Hypotheses and a proposed research agenda* (World Bank Discussion Papers 107). Washington, DC: The World Bank.

Kent, M. M., & Haub, C. (2005). Global demographic divide. *Population Bulletin, 60*(4).

Kenyatta, J. (1965). *Facing Mount Kenya: The tribal life of the Gikuyu*. New York: Vintage Books.

Kessel, E., Brenner, W. E., & Stathes, G. H. (1975). Menstrual regulation in family planning services. *American Journal of Public Health, 65*(7), 731–734.

King, M. (1990). Health is a sustainable state. *The Lancet, 336*(8716), 664–667.

Kinsella, K., & Phillips, D. R. (2005). Global aging: The challenge of success. *Population Bulletin, 60*(1).

Kiragu, K., Krenn, S., Kusemiju, B., Ajiboye, J. K. T., Chidi, I., & Kalu, O. (1996). *Promoting family planning through mass media in Nigeria: Campaigns using a public service announcement and a national logo*. Baltimore: Johns Hopkins Center for Communication Programs.

Kissling, F. (1994). Theo-politics: The Roman Catholic Church and population policy. In L. A. Mazur (Ed.), *Beyond the numbers: A reader on population, consumption, and the environment* (pp. 320–329). Washington, DC/Covelo: Island Press.

Kitaoka, J. (1957). *Over-population and family planning in Japan*. Tokyo: The Science Council of Japan, Division of Economics & Commerce Economic Series 14.

Kligman, G. (1998). *The politics of duplicity: Controlling reproduction in Ceausescu's Romania*. Berkeley: University of California Press.

Kohnert, D. (2007). *African migration to Europe: Obscured responsibilities and common misconceptions* (Munich Personal RePEc Archive Paper 3360). Munich: German Institute of Global and Area Studies.

Küng, H. (2008). *Disputed truth: Memoirs II*. New York/London: Continuum International Publishing Group.

La Ferrara, E., Chong, A., & Duryea, S. (2008). *Soap operas and fertility: Evidence from Brazil* (BREAD Working Papers 172). Durham, NC: Bureau for Research and Economic Analysis of Development.

Lakshminarayanan, R. (2003). Decentralisation and its implications for reproductive health: The Philippines experience. *Reproductive Health Matters, 11*(21), 96–107.

Landry, A. (1982). *La révolution démographique: Études et essais sur les problèmes de la population*. Paris: Institut national d'études démographiques (reprint of the 1934 edit.).

Langford, C. M. (2003). Glass, David. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 467–468). New York: Macmillan Reference USA.

Lazear, E. P. (2000). Economic imperialism. *Quarterly Journal of Economics, 115*(1), 99–146.

Le Bras, H. (1991). *Marianne et les lapins: L'obsession démographique*. Paris: Olivier Orban.

Lee, R. (2003). The demographic transition: Three centuries of fundamental change. *Journal of Economic Perspectives, 17*(4), 167–190.

Lee, M. (2009). *Aging, family structure and health*. Washington, DC: Population Reference Bureau.

Lee, R., & Mason, A. (2006). What is the demographic dividend? *Finance and Development, 43*(3), 16–17.

Leewannapasai, S., Durongdej, S., & Sowana, A. (2001). Application of Geographic Information Systems (GIS) for analysing and planning of reproductive health services in Pattani province. *GIS development*. See http://www.gisdevelopment.net/application/health/overview/healthp0011pf.htm. Accessed on May 25, 2010.

Lesthaeghe, R. J. (1989). Social organization, economic crises, and the future of fertility control in Africa. In R. J. Lesthaeghe (Ed.), *Reproduction and social organization in sub-Saharan Africa* (Studies in Demography 4, pp. 475–505). Berkeley: University of California Press.

Levine, R., & What Works Working Group. (2007). *Cases studies in global health: Millions saved* (The Essential Public Health Series). Subdury: Jones and Bartlett Publishers.

Levine, R., Langer, A., Birdsall, N., Matheny, G., Wright, M., & Bayer, A. (2006). Contraception. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, P. Jha, A. Mills, & P. Musgrove (Eds.), *Disease control priorities in developing countries* (2nd ed., pp. 1075–1090). New York: Oxford University Press.

Lévy, M. L. (2007). Le péché originel de la politique familiale française. *Agir. Revue générale de stratégie (L'engrenage démographique), 29*, 45–53.

Li J., Xin, Y., & Yuon, L. (2009). *Hybrid rice technology development: Ensuring China's food security* (IFPRI Discussion Paper 00918). Washington, DC: International Food Policy and Research Institute.

Lindblom, C. E. (1968). *The policy-making process*. Englewoods Cliff: Prentice-Hall.

Livi-Bacci, M. (2007). *A concise history of world population* (4th ed.). Malden: Blackwell Publishing.

Lloyd, C. B., Kaufman, C. E., & Hewett, P. (2000). The spread of primary schooling in sub-Saharan Africa: Implications for fertility change. *Population and Development Review, 26*(3), 483–515.

Longman, P. (2004). *The empty cradle: How falling birthrates threaten world prosperity and what to do about it*. Cambridge: Basic Books.

Lopez, A. D. (2003). Burden of disease. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 244–247). New York: Macmillan Reference USA.

Lopi, B. (2004). *Gender & poverty in the context of human development, health, education and the MDGs.* A presentation to the commission for Africa, Southern African consultation, Lusaka, Zambia, December 13–14, 2004. Harare: Commission for Africa & Southern African Regional Poverty Network.

Lowell, B. L., & Findlay, A. M. (2001). *Migration of highly skilled people from developing countries: Impact and policy responses. Synthesis report*. Geneva/London: International Labour Office & Department for International Development, UK.

Lutz, W. (Ed.). (2011). Toward a new set of science-based world population projections by age, sex, and level of educational attainment for individual countries (including the Provinces of India and China). *PopNet (IIASA Population Network Newsletter) 42*, 4–5.

Lutz, W., & KC, S. (2011). Global human capital: Integrating education and population. *Science, 333*(6042), 587–592.

Lutz, W., Sanderson, W. C., & O'Neill, B. C. (2004a). Conceptualizing population in sustainable development: From "population stabilization" to "population balance". In W. Lutz, W. S. Sanderson, & S. Scherbov (Eds.), *The end of world population growth in the 21st century: New challenges for human capital formation and sustainable development* (pp. 315–334). London: Earthscan.

Lutz, W., Sanderson, W. C., & Scherbov, S. (2004b). *The end of world population growth in the 21st century: New challenges for human capital formation & sustainable development*. London: Earthscan.

Lutz, W., Crespo Cuaresma, J., & Sanderson, W. (2008a). The demography of educational attainment and economic growth. *Science, 319*(5866), 1047–1048.

Lutz, W., Sanderson, W., & Scherbov, S. (2008b). The coming acceleration of global population aging. *Nature, 451*, 716–719.

MacDonald, A. L. (2003). Population organizations. National and international agencies. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 739–742). New York: Macmillan Reference USA.

MacKellar, L., Ermolieva, T., Horlacher, D., & Mayhew, L. (2004). *The economic impacts of population ageing in Japan* (ESRI Studies Series on Ageing, International Institute for Applied Systems Analysis). Cheltenham/Northampton: Edward Elgar Publishing Limited & Edward Elgar Publishing, Inc.

Magnus, G. (2009). *The age of aging: How demographics are changing the global economy and our world*. Singapore: John Wiley & Sons (Asia) Pte. Ltd.

Maine, D., & Stamas, K. (2003). Maternal mortality. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 628–631). New York: Macmillan Reference USA.

Malthus, T. R. (1976). In A. Flew (Ed.), *An essay on the principle of population, as it affects the future improvement of society with remarks on the speculations of Mr. Godwin, M. Condorcet, and other writers.* London, UK: Penguin Books. (Reprint of the 1798 edit).

Mandl, U., Dierx, A., & Ilzkovitz, F. (2008). *The effectiveness and efficiency of public spending* (Economic Papers 301). Brussels: European Commission, Directorate-General for Economic and Financial Affairs.

Martin, P., & Midgley, E. (2006). Immigration: Shaping and reshaping America. *Population Bulletin, 61*(4).

Martin, P., & Widgren, J. (2002). International migration: Facing the challenge. *Population Bulletin, 57*(1).

Martin, P., & Zürcher, G. (2008). Managing migration: The global challenge. *Population Bulletin, 63*(1).

Mastroianni, L., Jr. (2003). Reproductive technologies. Modern methods. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 849–852). New York: Macmillan Reference USA.

Maternowska, M. C. (2006). *Reproducing inequities: Poverty and the politics of population in Haiti*. New Brunswick: Rutgers University Press.

Mauldin, W. P., & Ross, J. A. (1991). Family planning programs: Efforts and results, 1982–89. *Studies in Family Planning, 22*(6), 350–367.

May, J. F. (1990). Haiti – Where fertility is on the increase. *People, 17*(2), 28–29.

May, J. F. (1991). Myanmar (Burma). *Population Today, 19*(7/8), 12.

May, J. F. (1995). Policies on population, land use, and environment in Rwanda. *Population and Environment, 16*(4), 321–334.

May, J. F. (1996). Demographic pressure and population policies in Rwanda, 1962–1994. *Population et Sociétés 319* (translation).

May, J. F. (2001). New approaches to population policies and programmes in sub-Saharan Africa. In *Third African Population Conference, Durban, South Africa, 6–10 December 1999: The African population in the 21st century*, Dakar: Union for African population studies, *5,* 145–159.

May, J. F. (2005). Population policy. In D. L. Poston & M. Micklin (Eds.), *Handbook of population* (pp. 827–852). New York: Kluwer Academic/Plenum Publisher Springer Science & Business Media, Inc.

May, J. F., & Guengant, J. P. (2008, March 13). Africa's greatest challenge is to reduce fertility. *The Financial Times* (US Edit.).

May, J. F., & Guengant, J. P. (2010, February 24). Haiti must tackle its high birth rate. *Financial Times* (US Edit.).

May, J. F., Mukamanzi, M., & Vekemans, M. (1990). Family planning in Rwanda: Status and prospects. *Studies in Family Planning, 21*(1), 20–32.

May, J. F., Van De Perre, P., Sokal, D., Carael, M., Fox, E., Habiyakare, T., & Bucyendore, A. (1991). AIDS prevention and family planning. *The Lancet, 338*(8758), 63–64.

Maynard-Tucker, G. (1994). Indigenous perceptions and quality of care in family planning services in Haiti. *Health Policy and Planning, 9*(3), 306–317.

McClory, R. (1995). *Turning point: The inside story of the papal birth control commission, and how humanae vitae changed the life of patty Crowley and the future of the church*. New York: Crossroad.

McDonald, P. (2000). Gender equity, social institutions, and the future of fertility. *Journal of Population Research, 17*(1), 1–16.

McDonald, P. (2002). Sustaining fertility through public policy: The range of options. *Population-E, 57*(3), 417–446.

McDonald, P. (2003). Family policy. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 371–374). New York: Macmillan Reference USA.

McDonald, P. (2006). Low fertility and the state: The efficacy of policy. *Population and Development Review, 32*(3), 485–510.
McGreevey, W., Acharya, A., Hammer, J. S., & MacKellar, L. (2008). Propinquity matters: How better health, urbanization, and income grew together, 1870–2008. *Georgetown Journal on Poverty Law & Policy, 15*(3), 605–633.
McIntosh, C. A. (1983). *Population policy in Western Europe: Responses to low fertility in France, Sweden, and West Germany*. Armonk/London: M.E. Sharpe, Inc.
McIntosh, C. A., & Finkle, J. L. (1995). The Cairo conference on population and development: A new paradigm? *Population and Development Review, 21*(2), 223–260.
McIntosh, C. A., & Finkle, J. L. (2003). International population conferences. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 168–170). New York: Macmillan Reference USA.
McKeown, T. (1976). *The modern rise of population*. London/New York: Edward Arnold & Academic Press.
McNeill, W. H. (1990). *Population and politics since 1750*. Charlottesville/London: University Press of Virginia.
McNicoll, G. (1975). Community-level population policy: An exploration. *Population and Development Review, 1*(1), 1–21.
McNicoll, G. (1980). Institutional determinants of fertility change. *Population and Development Review, 6*(3), 441–462.
McNicoll, G. (2001). Government and fertility in transitional and post-transitional societies. In R. A. Bulatao & J. B. Casterline (Eds.), *Global fertility transition*. New York: The Population Council. *Population and Development Review,* Supplement to Vol. 27, 129–159.
McNicoll, G. (2003). Population and development. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 226–234). New York: Macmillan Reference USA.
Measham, A. R., & Lopez-Escobar, G. (2007). Against the odds: Colombia's role in the family planning revolution. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 121–135). Washington, DC: The World Bank.
Mensch, B. S., Bruce, J., & Greene, M. E. (1998). *The uncharted passage: Girls' adolescence in the developing world*. New York: The Population Council.
Merrick, T. W. (2001). Population and poverty in households: A review of reviews. In N. Birdsall, A. C. Kelley, & S. W. Sinding (Eds.), *Population matters: Demographic change, economic growth, and poverty in the developing world*. New York: Oxford University Press.
Merrick, T. W. (2002). Population and poverty: New views on an old controversy. *International Family Planning Perspectives, 28*(1), 41–46.
Meslé, F., & Vallin, J. (2002). La mortalité dans le monde: Tendances et perspectives. In J. C. Chasteland & J. C. Chesnais (Eds.), *La population du monde: Géants démographiques et défis internationaux* (2nd ed., pp. 527–546). Paris: Institut national d'études démographiques.
Micklin, M. (1994). Population policies in the Caribbean: Present status and emerging issues. *Social and Economic Studies, 43*, 1–32.
Middleberg, M. I. (2003). *Promoting reproductive security in developing countries*. New York: Kluwer Academic/Plenum Publishers.
Milanovic, B. (2006). *Global income inequality: What it is and why it matters* (Policy Research Working Paper 3865). Washington, DC: The World Bank.
Milanovic, B. (2009). *Global inequality of opportunity – How much of our income is determined at birth?* (Development Working Group), February 2009. Washington, DC: The World Bank.
Millennium Ecosystem Assessment. (2005). *Ecosystem and human well-being: A synthesis*. Washington, DC: Island Press.
Miller, G. (2005). *Contraception as development? New evidence from family planning in Colombia* (NBER working paper W11704). Cambridge: National Bureau of Economic Research (NBER).
Miller, M., Barrett, S., & Henderson, D. A. (2006). Control and eradication. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, P. Jha, A. Mills, &

P. Musgrove (Eds.), *Disease control priorities in developing countries* (2nd ed., pp. 1163–1176). New York: Oxford University Press.
Ministry of Foreign Affairs of the Netherlands. (2008). International migration and development. *Policy Memorandum*. The Hague: Ministry of Foreign Affairs.
Minou, D. (2006, October 26). Iran: La politique nataliste d'Ahmadinejad soulève un tollé à Téhéran. *Le Figaro.*
Mola, G., Thornton, J., Breen, M., Bullough, C., Guillebaud, J., & Addo, F. (Eds.). (2003). *Primary mother care and population.* Definitive edit. Stamford: Published privately by M. King.
Moser, C., & Moser, A. (2005). Gender mainstreaming since Beijing: A review of success and limitations in international institutions. *Gender & Development, 13*(2), 11–22.
Mosley, W. H., Jamison, D. T., & Henderson, D. A. (1990). The health sector in developing countries: Problems for the 1990s and beyond. *Annual Review of Public Health, 11*, 335–358.
Mutunga, C., & Hardee, K. (2009). Population and reproductive health in national adaptation programmes of action (NAPAs) for climate change. In J. M. Guzman, G. Martine, G. McGranahan, D. Schensul, & C. Tacoli (Eds.), *Population dynamics and climate change*. New York/London: UNFPA and International Institute for Environment and Development.
National Academy of Sciences. (1971). *Rapid population growth: Consequences and policy implications*. Baltimore: Johns Hopkins Press for the National Academy of Sciences. 2 vol.
National Committee for Population and Family Planning. (1997). *The costs and benefits of Vietnam's national investment in population and family planning from 1979 to 2010. Final report*. Hanoi: The National Committee for Population and Family Planning.
National Institute on Aging. (2007). *Why population aging matters?* Washington, DC: US Department of Health and Human Services.
National Research Council. (2003). Cities transformed: Demographic change and its implications in the developing world. In Panel on Urban Population Dynamics, M. R. Montgomery, R. Stren, B. Cohen, & H. E. Reeds (Eds.), *Committee on population, division of behavioral and social sciences and education*. Washington, DC: The National Academic Press.
Ndulu, B. J., Chakraborti, L., Lijane, L., Ramachandran, V., & Wolgin, J. (2007). *Challenges of African growth. Opportunities, constraints, and strategic directions*. Washington, DC: The World Bank.
Nghia, D. T., & Khe, N. D. (2001). *Vietnam abortion situations country report*. Paper for the conference on Expanding access: Advancing the role of midlevel providers in menstrual regulation and elective abortion care. Pilanesberg National Park, ZA, December 3–6, 2001.
Niehof, A., & Lubis, F. (Eds.). (2003). *Two is enough: Family planning in Indonesia under the new order 1968–1998*. Leiden: KITLV Press.
Noonan, J. T., Jr. (1965). *Contraception: A history of its treatment by the catholic theologians and canonists*. Cambridge: The Belknap Press of Harvard University Press.
Norgren, T. (2001). *Abortion before birth control: The politics of reproduction in postwar Japan*. Princeton: Princeton University Press.
Nortman, D. L., & Hosfstatter, E. (1978). *Population and family planning programs* (9th ed.). New York: The Population Council.
Notestein, F. W. (1954). World population conference Rome, August 31–September 10. *Population Index, 20*(4), 241–248.
Noymer, A. (2003). Tuberculosis. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 946–948). New York: Macmillan Reference USA.
O'Neill, B. C., & Lutz, W. (2003). Projections and forecast, population. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 808–813). New York: Macmillan Reference USA.
O'Neill, B. C., Dalton, M., Fuchs, R., Jiang, L., Pachauri, S., & Zigova, K. (2010). Global demographic trends and future carbon emissions. *Proceedings of the National Academy of Sciences, 107*, 17521–17526.
Oakley, D. (1978). American-Japanese interaction in the development of population policy in Japan, 1945-52. *Population and Development Review, 4*(4), 617–643.

OECD. (2002). Glossary of key terms in evaluation and results based management. In *Evaluation and aid effectiveness* (Vol. 6). Paris: Organisation for Economic Co-operation and Development, Development Assistance Committee Working Party on Aid Evaluation.

Omran, A. R. (1992). *Family planning in the legacy of Islam*. London/New York: Routledge.

Ott, E. R. (1977). Population policy formation in Colombia: The role of ASCOFAME. *Studies in Family Planning, 8*(1), 2–10.

Over, M., & Aisnworth, M. (1999). *Confronting AIDS: Public priorities in a global epidemic* (Revth ed.). Oxford: Oxford University Press for the World Bank.

Pacific Small Island Developing States. (2009). *Views on the possible security implications of climate change to be included in the report of the secretary-general to the 64th session of the United Nations general assembly*. New York: Permanent Mission of the Republic of Nauru to the United Nations. See http://www.un.org/esa/dsd/resources/res_pdfs/ga-64/cc-inputs/PSIDS_CCIS.pdf. Accessed on August 21, 2010.

Packard, R. M. (2007). *The making of a tropical disease: A short history of malaria*. Baltimore: The Johns Hopkins University Press.

Park, I. H., Lee, H. S., Kong, S. K., Cho, H., Kim, M. C., Choi, E. J., Byun, W. S., Lee, D. W., Lim, H. C., Lee, M., & Kim, S. (1998). Korea: A new look at fertility transition – Its impact on women, summary of preliminary report. In *The women's studies project*. Durham: Family Health International.

Pebley, A. R. (1998). Demography and the environment. *Demography, 35*, 377–389.

Phillips, J. F., & Ross, J. A. (Eds.). (1992). *Family planning programmes and fertility*. Oxford: Clarendon.

Phillips, J. F., Simmons, R., Koenig, M. A., & Chakraborty, J. (1988). Determinants of reproductive change in a traditional society: Evidence from Matlab, Bangladesh. *Studies in Family Planning, 19*(6), 313–334.

Pietro, L., & Sacristán, J. A. (2003). Problems and solutions in calculating quality-adjusted life years (QALYs). *Health and Quality of Life Outcomes, 1*(80), 1–8.

Pitt, M. M., Rosenzweig, M. R., & Gibbons, D. M. (1993). The determinants and consequences of the placement of government programs in Indonesia. *World Bank Economic Review, 7*(3), 319–348.

Population Foundation of India & Population Reference Bureau. (2007). *The future population of India: A long-range demographic view*. New Delhi: Population Foundation of India.

Population Impact Project. (1995). *Introducing Ghana's revised population policy*. Legon: University of Ghana, Department of Geography and Resource Development, Population Impact Project.

Population Reference Bureau. (2006). *Making the link in the Philippines: Population, health, and the environment*. Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2007a). Assessing the fiscal impact of aging. In *Research highlights in demography and economy of aging* (Vol. 9). Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2007b). How does HIV/AIDS affect the elderly in developing countries? In *Today's research on ageing* (Vol. 6). Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2008). *Family planning worldwide: 2008 data sheet*. Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2009a). *Nepal: Summary*. Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2009b). Social security systems around the world. In *Today's research on aging, program and policy implications* (Issue 15). Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2010a). *2010 world population data sheet*. Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2010b). *Botswana: Summary*. Washington, DC: Population Reference Bureau.

Population Reference Bureau. (2010c). *Ethiopia: Summary*. Washington, DC: Population Reference Bureau.
Population Reference Bureau. (2010d). *Philippines: Summary*. Washington, DC: Population Reference Bureau.
Porter, F., & Sweetman, C. (2005). Editorial 2. In F. Porter & C. Sweetman (Eds.), *Mainstreaming gender in development: A critical review*. London: Oxfam.
Poston, D. L., & Micklin, M. (Eds.). (2005). *Handbook of population*. New York: Kluwer Academic/Plenum Publisher Springer Science & Business Media, Inc.
Poston, D. L., Jr., Lee, C. F., Chang, C. F., McKibben, S. L., & Walther, C. S. (Eds.). (2006). *Fertility, family planning, and population policy in China*. London/New York: Routledge.
Potts, M., Gidi, V., Campbell, M., & Zureick, S. (2011). Niger: Too little, too late. *International Perspectives on Sexual and Reproductive Health, 37*(2), 95–101.
Pritchett, L. H. (1994). Desired fertility and the impact of population policies. *Population and Development Review, 20*(1), 1–55.
Pritchett, L. (2006). *Let their people come: Breaking the gridlock on global labor mobility*. Washington, DC: Center for Global Development.
Reich, M. R. (1996). Applied political analysis for health policy reform. *Current Issues in Public Health, 2*, 186–191.
Reid, H., & Satterthwaite, D. (2007). *Climate change and cities: Why urban agendas are central to adaptation and mitigation* (Sustainable Development Opinion Papers). London: International Institute for Environment and Development. See http://pubs.iied.org/pdfs/17025IIED.pdf. Accessed on March 7, 2011.
Republic of Cameroon. (2002). *Declaration of the national population policy*. Yaoundé: Ministry of Economic Affairs, Programming, and Regional Development.
Republic of Niger. (2007). *Déclaration du gouvernement en matière de politique de population*. Niamey: Ministère de la Population et de l'Action Sociale.
Riley, N. E. (1997). Gender, power, and population change. *Population Bulletin, 52*(1).
Robine, J. M. (2003). Epidemiological transition. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 307–310). New York: Macmillan Reference USA.
Robinson, W. C., & El-Zanaty, F. H. (2006). *The demographic revolution in modern Egypt*. Lanham: Lexington Books.
Robinson, W. C., & El-Zanaty, F. H. (2007). The evolution of population policies and programs in the Arab Republic of Egypt. In W. C. Robinson & J. A. Ross (Eds.), *The global family panning revolution: Three decades of population policies and programs* (pp. 15–31). Washington, DC: The World Bank.
Robinson, W. C., & Ross, J. A. (Eds.). (2007a). *The global family planning revolution: Three decades of population policies and programs*. Washington, DC: The World Bank.
Robinson, W. C., & Ross, J. A. (2007b). Family planning: The quiet revolution. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 421–449). Washington, DC: The World Bank.
Rochefort, R. (2000). *Vive le papy-boom*. Paris: Éditions Odile Jacob.
Rogers, A., Anderson, B., & Clark, N. (2009). *Recession, vulnerable workers and immigration: Background report*. Oxford: COMPAS.
Romaniuk, A. (2011). Persistence of high fertility in tropical Africa: The case of the democratic republic of the Congo. *Population and Development Review, 37*(1), 1–28.
Rosenfield, A. G., & Limcharoen, C. (1972). Auxiliary midwife prescription of oral contraceptives: An experimental project in Thailand. *American Journal of Obstetrics and Gynecology, 114*(7), 942–949.
Rosenzweig, M. R., & Wolpin, K. I. (1986). Evaluating the effects of optimally distributed public programs: Child health and family planning interventions. *American Economic Review, 76*, 470–482.
Rottach, E., Schuler, S. R., & Hardee, K. (2009). *Gender perspectives improve reproductive health outcomes: New evidence*. Washington, DC: Population Reference Bureau.
Roudi-Fahimi, F. (2004). *Islam and family planning*. Washington, DC: Population Reference Bureau.

Ruiz Austria, C. S. (2004). The Church, the state and women's bodies in the context of religious fundamentalism in the Philippines. *Reproductive Health Matters, 12*(24), 96–103.
Sachs, J. D. (2008). *Common wealth: Economics for a crowded planet*. New York: The Penguin Press.
Salmen, L. F. (2002). Beneficiary assessment: An approach described. *Social development papers* (Paper 10). Washington, DC: The World Bank.
Samarasekera, U. (2008). WHO: 60 years on. *The Lancet, 371*(9619), 1151–1152.
Sanderson, W., & Scherbov, S. (2008). Rethinking age and aging. *Population Bulletin, 64*(4).
Santo Tomas, P. A., Summers, L. H., & Clemens, M. (2009). *Migrants count: Five steps toward better migration data. Report of the commission on international migration data for development research and policy*. Washington, DC: Center for Global Development.
Sathar, Z. A., & Casterline, J. B. (1998). *The onset of fertility transition in Pakistan*. New York: The Population Council.
Sauvy, A. (1949). Le "faux problème" de la population mondiale." *Population 4*(3), 447–462 (English translation in *Population and Development Review 16*(4), 1990: 759–774).
Sauvy, A. (1987). *L'Europe Submergée. Sud → Nord dans 30 ans*. Paris: Dunod.
Saw, S. H. (1990). *Changes in the fertility policy of Singapore* (IPS Occasional Paper 2). Singapore: Times Academic Press for Institute of Policy Studies.
Scharping, T. (2003). *Birth control in China 1949-2000: Population policy and demographic development*. London/New York: RoutledgeCurzon.
Schuler, S. R., McIntosh, E. N., Goldstein, M. C., & Pande, B. R. (1985). Barriers to effective family planning in Nepal. *Studies in Family Planning, 16*(5), 260–270.
Schultz, T. P. (2002). Why governments should invest more to educate girls. *World Development, 30*(2), 207–225.
Schwarz, K. (1989). Les effets démographiques de la politique familiale en RFA et dans ses länder depuis la seconde guerre mondiale. *Population, 44*(2), 395–415.
Sciubba, J. D. (2010). *The future faces of war: Population and national security*. Santa Barbara: Praeger.
Scornet, C. (2000). Un exemple de réduction de la fécondité sous contraintes: la région du delta du fleuve rouge au Viêt Nam. *Population, 55*(2), 265–300.
Sedgh, G., Henshaw, S., Singh, S., Åhman, E., & Shah, I. H. (2007a). Induced abortion: Estimated rates and trends worldwide. *The Lancet, 370*, 1338–1345.
Sedgh, G., Henshaw, S., Singh, S., Bankole, A., & Drescher, J. (2007b). Legal abortion worldwide: Incidence and recent trends. *International Family Planning Perspectives, 33*(3), 106–116.
Sekeris, P. G. (2010). *Land inequality and conflict intensity (note).* See http://petros.sekeris.org/land_inequality_SSA.pdf. Accessed on August 22, 2010.
Sévillia, J. (2004). *Le terrorisme intellectuel de 1945 à nos jours* (2nd ed.). Paris: Perrin.
Shah, N. M. (2004). Gender and labour migration to the Gulf countries. *Feminist Review, 44*, 183–185.
Sharan, M., Ahmed, S., May, J., & Soucat, A. (2011). Family planning trends in sub-Saharan Africa: Progress, prospects, and lessons learned. In P. Chuhan-Pole & M. Angwafo (Eds.), *Yes Africa can: Success stories from a dynamic continent* (pp. 445–463). Washington, DC: The World Bank.
Shiffman, J. (2009). A social explanation for the rise and fall of global health issues. *Bulletin of the World Health Organization, 87*(8), 608–613.
Shiffman, J., Berlan, D., & Hafner, T. (2009). Has aid for AIDS raised all health funding boats? *Journal of Acquired Immune Deficiency Syndromes, 52*(Suppl. 1), S45–S48.
Shrestha, L. B. (2000). Population aging in developing countries. *Health Affairs, 19*(3), 204–212.
Silberschmidt, M. (1999). *Women forget that men are the masters gender antagonism and socio-economic change in the kisii district, Kenya*. Stockholm: Elanders Gotab.
Simon, J. (1996). *The ultimate resource 2*. Princeton: Princeton University Press.
Simwaka, B. N., Theobald, S., Amekudzi, Y. P., & Tolhurst, R. (2005). Meeting Millennium Development Goals 3 and 5: Gender equality needs to be put on the African agenda. *British Medical Journal, 331*(7519), 708–709.

Sinding, S. W. (2003). Family planning programs. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 1, pp. 363–371). New York: Macmillan Reference USA.
Sinding, S. W. (2005). Why is funding for population activities declining? *Asia-Pacific Population Journal, 20*(2), 3–9.
Sinding, S. W. (2007). Overview and perspective. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 1–12). Washington, DC: The World Bank.
Singh, J. S. (2009). *Creating a new consensus on population: The politics of reproductive health, reproductive rights and women's empowerment* (2nd ed.). London/Sterling: Earthscan.
Singh, S., Wulf, D., Hussain, R., Bankole, A., & Sedgh, G. (2009a). *Abortion worldwide: A decade of uneven progress*. New York: Guttmacher Institute.
Singh, S., Darroch, J. E., Ashford, L. S., & Vlassof, M. (2009b). *Adding it up: The costs and benefits of investing in family planning and maternal and newborn health*. New York: Guttmacher Institute & United Nations Population Fund.
Skolnik, R. (2008). *Essentials of global health*. Subdury: Jones and Bartlett Publishers.
Smil, V. (2005a). The next 50 years: Fatal discontinuities. *Population and Development Review, 31*(2), 201–236.
Smil, V. (2005b). The next 50 years: Unfolding trends. *Population and Development Review, 31*(4), 605–643.
Smil, V. (2008). *Global catastrophes and trends: The next 50 years*. Cambridge/London: The MIT Press.
Smith, M. D., Drummond, M., & Brixner, D. (2009). Moving the QALY forward: Rationale for change. *Value in Health, 12*(Suppl. 1), S1–S4.
Specter, M. (2005, October 24). What money can buy. *The New Yorker,* 56–71.
Speidel, J. J., Sinding, S., Gillespie, D., Maguire, E., & Neuse, M. (2009a). *Making the case for U.S. international family planning assistance*. Washington, DC: United States Agency for International Development.
Speidel, J. J., Weiss, D. C., Ethelston, S. A., & Gilbert, S. M. (2009b). Population policies, programmes and the environment. *Philosophical Transactions of the Royal Society, 364*, 3049–3062.
Stamper, B. M. (1977). *Population and planning in developing nations. A review of sixty development plans for the 1970s*. New York: The Population Council.
Stephenson, J., Newman, K., & Mayhew, S. (2010). Population dynamics and climate change: What are the links. *Journal of Public Health, 32*(2), 150–156.
Stewart, F. (2005). *Policies towards horizontal inequalities in post-conflict reconstruction* (CRISE Working Paper 7). Oxford: University of Oxford.
Stover, J. (1998). Revising the proximate determinants of fertility framework: What have we learned in the past 20 years? *Studies in Family Planning, 29*(3), 255–267.
Streatfield, P. K., & Ahsan, K. Z. (2008). Population challenges for Bangladesh in the coming decades. *Journal of Health, Population and Nutrition, 26*(3), 261–272.
Sullerot, É., Chesnais, J. C., Dupâquier, J., Godet, M., & Rossillon, P. (1996). SOS jeunesse! pour que la France ne se suicide pas par dénatalité. Appel pour sauver l'avenir. *Population et Avenir, 625*, 1–2.
Suzuki, T. (2009). Fertility decline and government interventions in Eastern Asian advanced countries. *The Japanese Journal of Population, 7*(1), 47–56.
Symonds, R., & Carder, M. (1973). *The United Nations and the population question, 1945–1970*. New York: McGraw Hill.
Tabutin, D. (2006). Information systems in demography. In G. Caselli, J. Vallin, & G. Wunsch (Eds.), *Demography: Analysis and synthesis. A treatise in population studies* (Vol. IV, pp. 493–522). San Diego: Academic Press/Elsevier.
Taeubner, I. B. (1958). *The population of Japan*. Princeton: Princeton University Press.
Takeda, H. (2005). *The political economy of reproduction in Japan: Between nation-state and everyday life*. Abingdon/New York: RoutledgeCurzon.
Teitelbaum, M. S., & Winter, J. M. (1998). *A question of numbers: High migration, low fertility, and the politics of national identity*. New York: Hill & Wang.

Teller, C., & Hailemariam, A. (Eds.). (2011). *The demographic transition and development in Africa: The unique case of Ethiopia*. New York: Springer.
Tembon, M. (2008). Conclusions and recommendations for the way forward. In M. Tembon & L. Fort (Eds.), *Girls' Education in the 21st century: Gender equality, empowerment and economic growth* (pp. 279–303). Washington, DC: The World Bank.
The CGD Working Group on UNFPA's Leadership Transition. (2011). *Focus UNFPA: Four recommendations for action*. Washington, DC: Center for Global Development.
The Economist (2007, July 28). Cloud, or silver linings? *The Economist* (US Edit.).
The Economist (2009, October 31). Falling fertility: How the population problem is solving itself. *The Economist* (US Edit.).
The Economist (2010, March 6). Gendercide: The worldwide war on baby girls. *The Economist* (US Edit.).
The Federal Government of Ethiopia. (2010). *Growth and transformation plan (GTP) 2010/11-2014/15*. Addis Ababa: The Federal Government of Ethiopia, Ministry of Finance and Economic Development.
Thévenon, O. (2011). Family policies in OECD countries: A comparative analysis. *Population and Development Review, 37*(1), 57–87.
Torrey, B. B. (2008). Population Tectonics Births, Deaths, and Immigration in North America. In D. M. Thomas & B. B. Torrey (Eds.), *Canada and the United States: Differences that count* (3rd ed., pp. 87–106). Peterborough: Broadview Press.
Torrey, B. B. (2010). Population dynamics and future food requirements in sub-Saharan Africa. In P. Pinstrup-Andersen (Ed.), *The African food system and its interaction with human health and nutrition* (pp. 182–198). Ithaca/London: Cornell University Press in cooperation with the United Nations University.
Torrey, B. B., & Eberstadt, N. (2005). The Northern America fertility divide. *Policy Review, 132*, 39–55. August &September.
Torrey, B. B., & Haub, C. (2004). A comparison of US and Canadian mortality in 1998. *Population and Development Review, 30*(3), 519–530.
Toubon, R. (2009). Planification familiale en afrique au sud du Sahara: Comment il serait possible de surmonter l'échec. *Équilibres & Populations. Lettre d'Information, 108*(2), 8–9.
Tribalat, M. (2010). *Les yeux grands fermés: L'immigration en France*. Paris: Denoël.
Tsui, A. O. (2001). Population policies, family planning programs, and fertility: The record. In R. A. Bulatao & J. B. Casterline (Eds.), *Global fertility transition*. New York: The Population Council. *Population and Development Review*, Supplement to Vol. 27, 184–204.
Tuljapurkar, S., Pool, I., & Prachuabmoh, V. (Eds.). (2005). *Population, resources and development: Riding the age waves, Vol. 1. International studies in population*. New York: Springer.
UNAIDS. (2000). *HIV and health-care reform in Phayao: From crisis to opportunity.* UNAIDS best practice collection. Geneva: Joint United Nations Programme on HIV/AIDS.
UNAIDS. (2009). *AIDS epidemic update 2009*. Geneva: Joint United Nations Programme on HIV/AIDS.
UNDP. (2003). *Human development report 2003: Millennium Development Goals: A compact among nations to end human poverty*. New York/Oxford: Oxford University Press.
UNDP. (2009). *Human development report 2009: Overcoming barriers: Human mobility and development*. New York: United Nations Development Programme.
UNDP. (2010a). *Focus areas: Inclusive development.* See http://www.undp.org/poverty/focus_inclusive_development.shtml. Accessed on July 12, 2010.
UNDP. (2010b). *Human development report 2010. The real wealth of nations: Pathways to human development*. New York: United Nations Development Programme.
UNDP. (2010c). *Key facts: Progress since Beijing*. New York: The Foundation of Millennium Development Goals, United Nations Development Programme.
UNDP. (2010d). *Uzbekistan – Crisis poverty and social impact analysis (PSIA)*. New York: The Inclusive Development Cluster, Poverty Group, United Nations Development Programme.
UNFPA. (1999). *Implementing the reproductive health vision: Progress and future challenges for UNFPA*. Evaluation findings, issue 15. New York: United Nations Population Fund, Office of Oversight and Evaluation.

UNFPA. (2003). Overview of adolescent life. In *State of world population 2003: Making 1 billion count: Investing in adolescents' health and rights*. New York: United Nations Population Fund.
UNFPA. (2005a). *Population, reproductive health and the Millennium Development Goals: How the ICPD programme of action promotes poverty alleviation and human rights*. New York: United Nations Population Fund.
UNFPA. (2005b). *State of world population 2005: The promise of equality: Gender equity, reproductive health & the MDGs*. New York: United Nations Population Fund.
UNFPA. (2009a). *Annual report 2008*. New York: United Nations Population Fund. See http://www.unfpa.org/webdav/site/global/shared/documents/publications/2009/annual_report_2008.pdf. Accessed on November 28, 2010.
UNFPA. (2009b). *Fact sheet: Population growth and poverty*. New York: United Nations Population Fund.
UNFPA. (2009c). *State of world population 2009: Facing a changing world: Women, population and climate*. New York: United Nations Population Fund.
UNFPA. (2010a). *Giving special attention to girls and adolescents*. New York: United Nations Population Fund. See http://www.unfpa.org/gender/girls.htm. Accessed on July 21, 2010.
UNFPA. (2010b). World youth conference: Why it pays to invest in young people. *UNFPA news dispatch August 27, 2010.* Leon: United Nations Population Fund. See http://www.unfpa.org/public/home/news/pid/6544. Accessed on July 4, 2010.
UN-HABITAT. (2001). *Istanbul +5*. The United Nations special session of the general assembly for an overall review and appraisal of the implementation of the UN-HABITAT Agenda, New York, June 6–8, 2001. New York: UN-HABITAT.
UN-HABITAT. (2005). *Nairobi urban sector profile study*. Regional urban sector profile study. New York: UN-HABITAT.
UN-HABITAT. (2008). *Meeting the urban challenges*. Seville: UN-HABITAT.
UN-HABITAT. (2010a). Urban world. *Urban World 2*(3). Nairobi: UN-HABITAT.
UN-HABITAT. (2010b). *The state of African cities 2010: Governance, inequality and urban land markets*. Nairobi: UN-HABITAT and UNEP.
UNHCR. (2010). *Statistical yearbook 2009: Trends in displacement, protection and solutions*. Geneva: United Nations High Commissioner for Refugees.
UNICEF. (2005). *Millennium Development Goals: 3. Promote gender equality and empower women*. New York: United Nations Children's Fund. See http://www.unicef.org/mdg/gender.html. Accessed on June 29, 2010.
United Nations. (1973). *The determinants and consequences of population trends: New summary of findings on interaction of demographic, economic and social factors* (Population Studies 50, Vol. 1). New York: United Nations, Department of Economic and Social Affairs.
United Nations. (1975). *Report of the United Nations world population conference, Bucharest, 19–30 August 1974*. New York: United Nations, Department of Economic and Social Affairs.
United Nations. (1984). *Report on the international conference on population, Mexico*, August 6–14, 1984. New York: United Nations, Department of Economic and Social Affairs.
United Nations. (1990a). International transmission of population policy experience. In *Proceedings of the expert group meeting on the international transmission of population policy experience,* New York, June 27–30, 1988. New York: United Nations, Department of International Economic and Social Affairs.
United Nations. (1990b). *Monographies sur les politiques de population: Haïti*. New York: United Nations, Department of International Economic and Social Affairs.
United Nations. (1995a). Beijing declaration and platform of action. In *Fourth world conference on women, Beijing*, September 4–15, 1995. New York: United Nations, Department of Economic and Social Affairs, Division for the Advancement of Women.
United Nations. (1995b). *Report on the international conference on population and development,* Cairo, September 5–13, 1994. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (1997). Glossary of environment statistics. In *Studies in methods* (Vol. F 67). New York: United Nations.

United Nations. (1998). *Universal Declaration of human rights*. New York: United Nations, Department of Public Information.
United Nations. (2000). *Replacement migration: Is it a solution to declining and aging populations?* New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2006a). *International migration report 2006: A global assessment*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2006b). *Levels and trends of contraceptive Use as assessed in 2002*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2007a). *Report of the secretary-general on the work of the organization.* (General Assembly, Official Records, Sixty-second session, Suppl. 1). New York: United Nations.
United Nations. (2007b). *World urbanization prospects: Revision 2007*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2008a). *World population policies 2007*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2008b). *World population projections: The 2008 revision population database*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2009a). *Conséquences de la croissance démographique dans les PMD?* (United Nations, Commission on Population and Development, 42nd Session, New York, March 30–April 3, 2009). Keynote address by J. P. Guengant. See http://www.un.org/esa/population/cpd/cpd2009/Keynote_Speakers/Guengant_March2009.pdf. Accessed on August 11, 2010.
United Nations. (2009b). *International migration 2009*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2009c). *World population aging 2009*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2009d). *World population prospects: The 2008 revision. Comprehensive tables* (Vol. 1). New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2010a). *The Millennium Development Goals report 2010*. New York: United Nations.
United Nations. (2010b). *World population aging 2009*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2010c). *World population policies 2009*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2010d). *World population prospects: The 2010 revision*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations. (2010e). *World urbanization prospects: The 2009 revision. Highlights*. New York: United Nations, Department of Economic and Social Affairs, Population Division.
United Nations Commission on the Status of Women. (2010). Report on the fifty-fourth session (13 March and 14 October 2009 and 1–12 March 2010). *Economic and social council official records 2010, supplement 7*. New York: United Nations, Economic and Social Council.
United States. (1984). Policy statement of the United States of America at the international conference on population. *Population and Development Review, 10*(3), 574–579.
Urquico, C. (2010). *The Philippines: Crisis poverty and social impact analysis summary*. Manila: United Nations Development Programme.
US National Academy of Sciences. (1986). *Population growth and economic development: Policy questions* (Report of the Working Group on Population Growth and Economic Development, National Research Council). Washington, DC: National Academy Press.
USAID. (2007). Family planning success stories in sub-Saharan Africa. *Global health technical briefings*. Washington, DC: United States Agency for International Development.
Utz-Billing, I., & Kentenich, H. (2008). Female genital mutilation: An injury, physical and mental harm. *Journal of Psychosomatic Obstetrics and Gynecology, 29*(4), 225–229.
Valette, R. (1996). *Le catholicisme et la démographie: Église, population mondiale et contrôle des naissances*. Paris: Les Éditions de l'Atelier/Éditions Ouvrières.

Van de Kaa, D. J. (2003). Second demographic transition. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (Vol. 2, pp. 872–875). New York: Macmillan Reference USA.
Van de Walle, E. (1982). *Multilingual demographic dictionary: English section* (2nd ed.). Liège: Ordina Editions for International Union for the Scientific Study of Population.
Van Houtum, H., & Pijpers, R. (2007). The European union as a gated community: The two-faced border and immigration regime of the EU. *Antipode, 39*(2), 291–309.
Van Puymbroeck, R., Gable, L., Gamharter, K., Gostin, L. O., & Hodge, J. G. (2007). *Legal aspects of HIV and AIDS: A guide for World Bank lawyers and task teams*. Washington, DC: The World Bank.
Véron, J. (1993). *Arithmétique de l'homme: La démographie entre science et politique*. Paris: Éditions du Seuil.
Verrière, J. (1978). *Les politiques de population* (Collection Le Géographe 26). Paris: Presses Universitaires de France.
Vertovec, S. (2007). *Circular migration: The way forward in global policy?* (International Migration Institute Working Paper 4). Oxford: University of Oxford.
Visaria, P., & Chari, V. (1998). India's population policy and family planning program: Yesterday, today, and tomorrow. In A. Jain (Ed.), *Do population policies matter? Fertility and politics in Egypt, India, Kenya, and Mexico* (pp. 53–112). New York: The Population Council.
Wang, F. (2010). *China's population destiny: The looming crisis*. Washington, DC: The Brookings Institution. See http://www.brookings.edu/articles/2010/09_china_population_wang.aspx. Accessed on January 19, 2011.
Warwick, D. P. (1982). *Bitter pills: Population policies and their implementation in eight developing countries*. New York: Cambridge University Press.
Waters, T. (2007). *The persistence of subsistence agriculture*. Lanham: Lexington Books.
Wattiaux, H. (2008). Amour humain et fécondité: La morale entre tradition et renouveau. *Revue Théologique de Louvain, 39*(3), 374–384.
Weeks, J. (2001). The role of spatial analysis in demographic research. In M. F. Goodchild & D. G. Janelle (Eds.), *Spatially integrated social science: Examples in best practice*. New York: Oxford University Press.
Weil, P. (1991). *La France et ses étrangers: L'aventure d'une Politique de l'immigration de 1938 à nos jours*. Paris: Gallimard.
Westoff, C. F. (2006). *New estimates of unmet need and the demand for family planning* (DHS Comparative Reports 14). Calverton: Macro International Inc.
Westoff, C. F., & Rodriguez, G. (1995). The mass media and family planning in Kenya. *International Family Planning Perspectives, 21*(1), 26–36.
White, T. (2006). *China's Longest campaign: Birth planning in the People's republic, 1949–2005*. Ithaca/London: Cornell University Press.
Whiteside, A. (2008). *HIV/AIDS. A very short introduction*. Oxford: Oxford University Press.
WHO. (2005). *Nepal and family planning: An overview*. New Delhi: World Health Organization, Department of Community and Family Health, Regional Office for South-East Asia.
WHO. (2006a). *Country health systems fact sheet 2006: Angola*. Geneva: World Health Organization.
WHO. (2006b). *Country health systems fact sheet 2006: Malawi*. Geneva: World Health Organization.
WHO. (2006c). *Country health systems fact sheet 2006: Niger*. Geneva: World Health Organization.
WHO. (2010). *Closing the gap in a generation: Health equity through action on the social determinants of health*. Geneva: World Health Organization.
WHO, UNICEF, UNFPA, & The World Bank. (2010). *Trends in maternal mortality: 1990 to 2008. Estimates developed by WHO, UNICEF, UNFPA and the World Bank*. Geneva: World Health Organization.
Williams, C. J. (2003, November 17). Haiti can't gain ground on erosion. *Los Angeles Times*.
Wills, G. (2000). *Papal Sin: Structures of deceit*. New York: Doubleday.
Wilmoth, J. R. (2003). Mortality decline. In P. Demeny & G. McNicoll (Eds.), *The encyclopedia of population* (pp. 654–662). New York: Macmillan Reference USA.

World Bank. (1984). *World development report 1984*. Washington, DC: The World Bank.
World Bank. (1986). *Population growth and policies in sub-Saharan Africa*. Washington, DC: The World Bank.
World Bank. (1988). *Indonesia: The transmigration program in perspective*. Washington, DC: The World Bank.
World Bank. (1991). *Population, health, and nutrition. Fiscal 1990 sector review* (Policy, Research, and External Affairs Working Paper 707). Washington, DC: The World Bank, Population and Human Resources Department.
World Bank. (1993). *World development report 1993: Investing in health*. Washington, DC: The World Bank.
World Bank. (1994a). *Averting the old age crisis: Policies to protect the old and promote growth*. Washington, DC: The World Bank.
World Bank. (1994b). *Population and development: Implications for the World Bank*. Washington, DC: The World Bank.
World Bank. (1994c). *Resettlement and development: The bankwide review of projects involving involuntary resettlement*. Washington, DC: The World Bank.
World Bank. (2000a). *Intensifying action against HIV/AIDS in Africa: Responding to a development crisis*. Washington, DC: The World Bank.
World Bank. (2000b). *Population and the World Bank: Adapting to change* (Revised ed.). Washington, DC: The World Bank.
World Bank. (2005). *Niger. Providing all Nigeriens with food, education, and health care: A demographic perspective*. Washington, DC: The World Bank.
World Bank. (2006a). *Global economic prospects: Economic implications of remittances and migration*. Washington, DC: The World Bank.
World Bank. (2006b). *World development indicators 2006*. Washington, DC: The World Bank.
World Bank. (2006c). *World development report 2007: Development and the next generation*. Washington, DC: The World Bank.
World Bank. (2007a). *Capturing the demographic bonus in Ethiopia: Gender, development, and demographic actions*. Washington, DC: The World Bank.
World Bank. (2007b). *Population issues in the 21st century: The role of the World Bank* (HNP Discussion Paper). Washington, DC: The World Bank.
World Bank. (2008). *Whispers to voices: Gender and social transformation in Bangladesh* (Bangladesh Development Series, Paper 22). Washington, DC: The World Bank.
World Bank. (2009). *World development report 2009: Reshaping economic geography*. Washington, DC: The World Bank.
World Bank. (2010a). *2010 world development indicators*. Washington, DC: The World Bank.
World Bank. (2010b). *Unmet need for contraception at a glance*. Washington, DC: The World Bank.
World Population Foundation. (2010). *Reproductive rights facts*. Utrecht: World Population Foundation. See http://www.wpf.org/reproductive_rights_article/facts#young_people. Accessed on August 22, 2010.
Wright, N. H. (2007). Early family planning efforts in Sri Lanka. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs* (pp. 341–362). Washington, DC: The World Bank.
Xinran, X. (2010). *Message from an unknown Chinese mother: Stories of loss and love*. London: Chatto/Windus.
Yap, M. T. (1995). Singapore's "Three or more" policy: The first five years. *Asia-Pacific Population Journal, 10*(4), 39–52.
Yazbeck, A. S. (2004). Real and perceived threats to reproductive health: A way forward. *Reproductive Health Matters, 12*(24), 25–34.
Yin, S. (2008). *How older women can shield themselves from poverty*. Washington, DC: Population Reference Bureau.
Ying, L. G. (2006). An institutional convergence perspective on China's recent growth experience: A research note. *Papers in Regional Science, 85*(2), 321–330.

Zimmermann, K. F. (1995). Tackling the European migration problem. *Journal of Economic Perspectives, 9*(2), 45–62.

Zolberg, A. R. (2006a). *A nation by design: Immigration policy in the fashioning of America*. Cambridge: Harvard University Press.

Zolberg, A. R. (2006b). Managing a world on the move. In P. Demeny, & G. McNicoll (Eds.), *The Political Economy of Global Population Change, 1950–2050*. New York: The Population Council. *Population and Development Review,* Supplement to Vol. 32, 222–253.

Zoubanov, A. (2000). Population aging and population decline: Government views and policies. *Expert group meeting on policy responses to population aging and population decline,* New York, October 16–18, 2000. New York: United Nations, Department of Economic and Social Affairs, Population Division.

Zuehlke, E. (2009a). *Gender difference in health among the elderly in China*. Washington, DC: Population Reference Bureau.

Zuehlke, E. (2009b). *Youth unemployment and underemployment in Africa bring uncertainty and opportunity*. Washington, DC: Population Reference Bureau. See http://www.prb.org/Articles/2009/youthunemployment.aspx. Accessed on August 21, 2010.

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J.F. May, *World Population Policies: Their Origin, Evolution, and Impact*,
DOI 10.1007/978-94-007-2837-0, © Springer Science+Business Media B.V. 2012

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