Dimiter Philipov · Aart C. Liefbroer
Jane E. Klobas *Editors*

Reproductive Decision-Making in a Macro-Micro Perspective

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Preface

Persistent low fertility levels in Europe have triggered an interest in fertility intentions among population scholars. Knowing why intentions to have a child remain unrealised can facilitate our understanding of the reasons for low fertility and help to draw relevant policy implications.

These issues were addressed in the research project "Reproductive decision-making in a macro–micro perspective" (REPRO) run under the European Commission's 7th Framework Programme. REPRO was designed to update existing knowledge and to generate new scientific knowledge about the factors that drive changes in birth rates and influence the reproductive decision-making of contemporary Europeans. The three-year project was completed in 2011.

The Theory of Planned Behavior (TPB) was applied to understand the reproductive decision-making of individuals. While this micro-level approach constituted an important backbone of REPRO, it was also embedded in the macro-level settings in which individuals formulate their personal decisions. REPRO comprised five substantive work-packages, each taking a different macro-, micro- or macro–micro perspective of reproductive decision making. This structure is reflected in Chaps. 2, 3, 4, 5, and 6 of this book. Chapter 1 introduces the fertility context into which REPRO was born and the macro–micro and TPB frameworks that underpin the project and the book. The last chapter summarizes key findings from research undertaken within REPRO, and by members of the REPRO team and their colleagues, since the project's conclusion glances at the road ahead and considers implications of the new theory, methods and findings from the REPRO project for future research and policy. The authors are members of the REPRO team.

The book is written for a wide range of readers. It can be used by graduate students who want to get acquainted with the formation of reproductive decision-making, by scientists interested in this topic and by policy advisors. The authors believe that the findings obtained in the REPRO project and reported in this book have opened up new ways of obtaining profound knowledge about reproductive decision-making and suggest new ways of considering the effects of policy on fertility decisions. We trust that readers find it valuable.

This publication would not have been possible without European Commission funding. The REPRO project was funded by the European Commission within the Seventh Framework Programme under the Socio-economic Sciences and Humanities theme (Grant Agreement: SSH-CT-2008-217173). As editors, we would like to thank Sylvia Trnka and Barbara Simunics at the Vienna Institute of Demography for their secretarial assistance. We are also thankful for an anonymous reviewer for his or her insightful comments on an earlier version of the manuscript. Finally, we would like to thank Evelien Bakker and Bernadette Deelen-Mans at Springer Publishing for their patience and enduring support.

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Chapter 1
Reproductive Decision-Making in a Macro-Micro Perspective: A Conceptual Framework

Aart C. Liefbroer, Jane E. Klobas, Dimiter Philipov, and Icek Ajzen

1.1 Introduction

Europe has been characterized by below-replacement fertility for several decades now (Frejka and Sobotka 2008). Moreover, when comparing the total fertility rate (TFR, measured fertility levels) with the ideal or intended number of children (i.e., desired fertility), it is evident that, at the macro-level, people want to have more children than they actually do (Van de Kaa 2001; Goldstein et al. 2003). The difference is known as the 'fertility gap' (Philipov 2009). A large fertility gap is interpreted as the result of obstacles people face when trying to realise their desired family size.

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This edited volume presents results from an international collaborative project, funded by the EU's 7th Framework Programme, which was designed to advance our understanding of the factors that influence the 'fertility gap' in European societies. The name of the project, 'Reproductive decision-making in a macro-micro perspective' (REPRO), succinctly summarizes what the project is about; it is about understanding how individuals make their micro-level fertility decisions within the opportunities and constraints provided by the macro-level structures in which they are embedded. In designing the REPRO project, the idea of the 'fertility gap' provided a clear focus to the conceptualization of the key issues to be tackled. Given that the 'gap' results from a discrepancy between fertility intentions and behaviours, the focus of the project was both on how individuals form their fertility intentions and on how and to what extent these intentions are realized. In addition, both individual-level and societal-level factors that influence the formation of intentions and their realization were studied.

The key aim of the results of the REPRO project presented in this volume is to provide a general sense of the theoretical and methodological orientation of the project, as well as a fresh and interesting sample of its substantive outcomes. It does not provide an exhaustive overview of the results of the project, as many empirical studies conducted within the REPRO project have been published in leading international journals in the field, and their content will only be alluded to in this volume. The volume also does not provide an exhaustive discussion of the theoretical underpinnings of the REPRO project (cf. Morgan et al. 2011) for a discussion of the Theory of Planned Behavior[1] or TPB, the theoretical approach guiding the REPRO project, and how it relates to other theoretical perspectives). Rather, the focus of the volume is on outlining the theoretical approach guiding our study, and highlighting interesting results about the different key components of our model.

This introductory chapter lays the theoretical and methodological foundation for the more substantive analyses presented in the rest of the volume. First, to set the stage, a brief overview of the main fertility trends in Europe in the past decades will be provided. Next, the general theoretical framework that guided research within the REPRO project is introduced. It starts from the contention that to understand macro-level trends in fertility, a thorough knowledge of micro-processes and how the micro- and macro-levels are interrelated, is a necessity. The following sections present the macro-level model, the micro-level model, and their interrelatedness, in more detail. The chapter concludes with a brief overview of the content of the rest of the volume.

1.2 The Background: Low Fertility in Europe

The 1960s marked the start of fertility decline in Europe. Fertility first dropped in the Scandinavian countries and soon after in Austria and Germany. It took until the 1980s for the decrease to be noted in southern Europe. The next decisive milestone

[1] Throughout this book, we retain the original US spelling of *behavior* in the name of the Theory of Planned Behavior, but use the English language spelling of *behaviour* elsewhere.

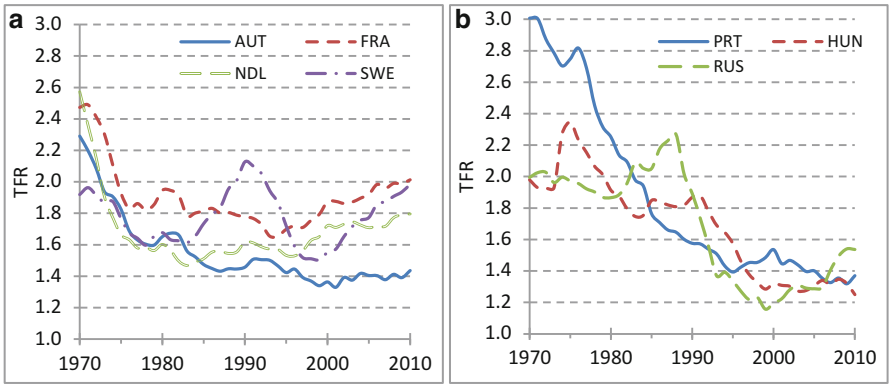

Fig. 1.1 Fertility decline in selected European countries: Austria (*AUT*), France (*FRA*), the Netherlands (*NLD*) and Sweden (*SWE*) in panel (**a**); Hungary (*HUN*), Portugal (*PRT*) and Russia (*RUS*) in panel (**b**)

was an abrupt fertility decline in the ex-socialist countries of Central and Eastern Europe around 1989 after the removal of the old political regimes. The time at which the total fertility rate (TFR) dropped below the replacement level of 2.1 children per woman is usually taken to indicate the onset of this development. Fertility has remained below replacement level ever since. No European country had fertility rates above replacement level in 2010. Figure 1.1 depicts these trends for selected countries from the regions.

Many countries witnessed a drastic fertility decline. Kohler et al. (2002) noted that at the end of the 1990s the TFR had reached a 'lowest low', i.e., levels below 1.3, in 14 southern, central and eastern European countries. During the 2000s, these rates recovered a bit (Goldstein et al. 2009). Figure 1.1 illustrates this trend for all countries except Portugal. One of the demographic factors mentioned by Kohler et al. (2002) to explain the drop in fertility rates is the postponement of fertility. It is connected to an increase in the mean age of childbearing by order of birth, which inflates period measures such as the TFR, although completed cohort fertility may remain unchanged. The amount by which the TFR is inflated constitutes the tempo effect of fertility, which must be distinguished from the quantum effect. A detailed discussion and measure of the tempo and quantum effects can be found in Bongaarts and Feeney (1998). They suggest a new tempo-free indicator of period fertility, the 'adjusted TFR'. Estimates show that during the 1990s this adjusted TFR is on average about 0.2–0.4 higher than the conventional TFR.

Thus, part of the TFR's drop to such low values as 1.3 is due to the tempo effect. In Kohler et al.'s terms (2002), the drop in the TFR can at least partially be viewed as a 'postponement transition'.

TFRs started to increase again during the 2000s. Lowest-low fertility levels of TFR < 1.3 were not observed anywhere in Europe around 2009, although they hovered only slightly above this level in such countries as Hungary and Moldova. These changes raised the question of whether lowest-low fertility was a development of the past, as discussed by Goldstein et al. (2009). Their analysis is based on the

adjusted TFR, which does not contain tempo effects and indicates that the postponement transition was one of the main reasons for the increase in TFR after 2000. This inference is of crucial importance for assessing the effect of family policies on births because, in some countries, the increase in TFR was attributed to policy measures introduced in this period. In times of fertility postponement, the TFR is a distorted measure and its usage for assessing policy effects could be misleading.

Although lowest-low fertility rates disappeared, fertility remained low and stayed below replacement level in all of Europe. Policy-makers continued to worry about Europe's persisting population decline and population ageing and invoked the argument of the gap between actual and desired fertility to introduce pro-natalist policies. For example, in Europe, the measured ideal number of children is around 2.1, which is considerably higher than actual fertility, regardless of whether we use the conventional period TFR or the tempo-free adjusted TFR. The gap, also referred to as the 'unmet need for children', is taken to point to difficulties in the realisation of people's desire for children. Sentences like "Europeans want more children than they actually have" can frequently be found in various documents prepared by the European Commission and the Council of Europe (see Philipov et al. (2009) for more detailed citations).

Measuring the fertility gap is not straightforward (see Sobotka and Lutz (2010) and Philipov and Bernardi (2012) for a discussion). The conventional TFR, the adjusted TFR or completed cohort fertility can be used to measure actual fertility. Measuring desired fertility is more problematic, because it is based on such concepts as the ideal or intended number of children, which are not clearly defined in demography (Philipov and Bernardi 2012). Hence it is not clear exactly what is measured when these indicators are used to determine the fertility gap. Policy-related inferences could thus be biased.

This highlights the need for a more rigorous definition and measurement of intentions. Given its centrality in social psychological theories (Fishbein and Ajzen 2010), the definitions of intention developed in that science can be applied when using the concept in demography. The application of theoretical models from social psychology can also help to better identify why some people manage to realise their intentions while those of others remain frustrated. In turn, this information may be useful for implementing policies.

As the above discussion makes clear, fertility intentions are a key component of reproductive decision-making. Because individuals decide about having children in a social environment, the micro-level construction of reproductive decision-making is embedded in a macro-level configuration. These ideas constitute the basis of the REPRO project, which is briefly outlined in Sect. 1.3.

1.3 General Framework

The basic premise of the REPRO project is that our understanding of micro-phenomena (such as the unmet need for children) and macro-phenomena (such as low birth rates) can be significantly improved by focusing on individuals' and

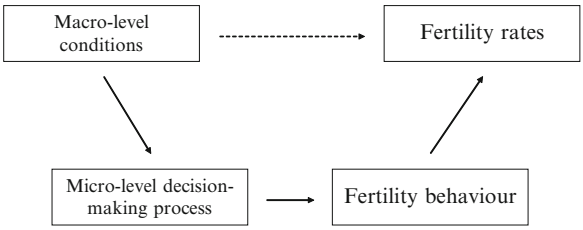

Fig. 1.2 A macro-micro model of fertility and its determinants (inspired by Coleman 1990)

couples' reproductive decision-making. A sound knowledge of these processes offers a solid basis for reflections on relevant public policies. We start our endeavour by conceptualising fertility as a macro-micro problem.

Understanding the relationship between the macro and micro-levels of analysis of social phenomena constitutes one of the major puzzles in social sciences. Coleman's micro-macro model (Coleman 1990; Opp 2011; Raub et al. 2011) provides a general analytic scheme to facilitate its solution. Figure 1.2 applies this scheme specifically to fertility intentions and births and outlines the theoretical kernel of the REPRO project in a concise manner. It shows that although fertility rates depend on the macro-level conditions in a society, this is not a direct effect. Macro-level conditions influence individuals' fertility decisions. Fertility behaviour can be seen as the outcome of this decision-making process. Finally, the fertility rates of a society are the macro-level result of the aggregation of the myriad of fertility decisions made by individuals and couples.

Figure 1.2 indicates that fertility rates are the aggregate-level result of individuals' and couples' fertility behaviour, which, in turn, is the result of individuals' or couples' decision-making processes. Understanding the important considerations in the decision-making process and the ways in which they are influenced by macro-level conditions, can help to design effective policy initiatives to strengthen individuals' and couples' freedom of fertility choices in a national and European context. The figure outlines three domains of scientific research:

- The macro-domain focuses on research that links macro-level economic, social, cultural and institutional conditions with fertility rates. It is depicted in the top layer of Fig. 1.2. The dotted line indicates that this relation is not necessarily causal.
- The micro-domain is explored by studies that refer to the decision-making process and its subsequent outcome. It is depicted in the bottom layer of Fig. 1.2.
- The macro-micro and micro-macro domains are dealt with by studies that analytically combine the top and bottom layers of Fig. 1.2. The macro-micro level is depicted by the left downward-pointing arrow the micro-macro level by the right upward-pointing arrow.

These three main lines of research are also reflected in the structure of this chapter and the entire book.

1.4 The Macro-level: Societal Environment and Fertility Rates

The influence of macro-level factors on fertility rates is usually studied exclusively at the macro-level. Examples include Butz's and Ward's (1979) early study of the relationship between gross domestic product (GDP) and fertility rates, studies by Engelhardt and colleagues (Engelhardt et al. 2004; Engelhardt and Prskawetz 2004) on the relationship between female labour force participation and fertility, and recent studies on the 'hockeystick' relationship between the TFR and the Human Development Index or GDP (Myrskylä et al. 2009). These studies focus on differences in fertility across countries or across time in one country or combine both approaches. In terms of Coleman's scheme as presented in Fig. 1.2, such studies link macro-conditions and macro-outcomes (fertility rates), but completely bypass the micro-level. The line, which describes the influence of macro-level conditions on fertility rates is *dotted* to signal that assuming a direct effect of macro-level variables on fertility may be misleading.

What is more, such macro-level studies run the risk of ecological fallacy by assuming that a relationship observed at the macro-level also holds true at the micro-level (Robinson 1950). For example, suppose that – at the macro-level – a rise in unemployment is associated with a decline in fertility. It may be wrong to infer that unemployed people decide to avoid childbearing as the association suggests. Inversely, when unemployment rises, the unemployed might decide to have their children while staying at home and those who are employed may decide to avoid childbearing in order not to lose their job in a shrinking labour market. Additional micro-level studies become necessary in order to examine these and other likely hypotheses more closely.

In general, macro-level studies cannot shed light on the micro-level processes that give rise to the observed relationship at the macro-level. Let us take a positive macro-level relationship between GDP and TFR as another example. How does this relationship come about? Is it because rich people can afford to have more children than poor people and the proportion of rich people is higher in countries with a higher GDP? Or is it because, irrespective of their income, all people in countries with a high GDP feel more secure and thus decide to have more children? Without clarifying the micro-level process, a macro-level relationship can be at best indicative and is open to manifold and even potentially incorrect interpretations.

An important mechanism that influences fertility rates at the macro-level is referred to as the composition effect. It can be observed when a population is heterogeneous with respect to fertility. Let us suppose that the proportion of highly educated people in a society increases. Though this does not necessarily influence individual decision-making, it does have an impact on the ratio between the higher and lower educated individuals in a society. If higher educated people, on average, have different fertility outcomes than their lower educated peers, an increase in the proportion of higher educated people will lead overall fertility outcomes in the society

to more strongly resemble those of the higher educated. This shift is due to changes in the educational composition of the population and not to a homogeneous fertility change throughout the entire population.

However, provided potential pitfalls such as ecological fallacy and compositional effects are taken into account, macro-level studies make an important contribution to science. The studies cited above instigated hot debates and induced in-depth research, which helped to make inferences drawn from their results more accurate. With these considerations in mind, Chap. 2 presents an international comparative macro-level analysis of the effect of family policies on fertility.

1.5 The Micro-level: Theory of Planned Behavior, Fertility Intentions and Their Realisation

The bottom level of Coleman's figure depicts the micro-level in the overall model. It comprises reproductive decision-making and subsequent behaviour that leads to relevant outcomes. The lower left box in Fig. 1.2 represents the construction process of individual reproductive decision-making, while the lower right box signifies the corresponding outcomes (i.e., having or not having a child). We first discuss the theoretical foundation of reproductive decision-making.

In demography, the concept of reproductive decision-making is not strictly defined. It usually involves such notions as the ideal number of children, fertility desires and fertility intentions. In a series of papers, Miller (see, for example, Miller and Pasta (1995); an overview is given in Miller (2011)) developed a theoretical framework which specifies a motivational sequence that drives reproductive behaviour. This sequence includes motivational traits, fertility desires and fertility intentions that entail proceptive or contraceptive reproductive behaviour, which, in turn, leads to the respective fertility events (outcomes). Although this theory is frequently cited, its use in demographic studies is rather limited, probably because it has not been operationalised and data are lacking.

In the REPRO project and in this book we use a different theoretical framework, namely the Theory of Planned Behavior (TPB[2]). It was developed in social psychology, operationalised in various surveys and has been used in demographic studies. As it is a general theory, it has been applied in a wide variety of fields (Fishbein and Ajzen 2010; Billari et al. 2009) used it to explain fertility intentions in Bulgaria and Billari and Liefbroer (2007) applied it in their research on leaving home in the Netherlands. A detailed description of the TPB and the requirements for its application in fertility studies can be found in Philipov et al. (2009), hence we will only present the highlights here.

[2] The TPB is an extension of the theory of reasoned action which will not be discussed here. See Fishbein and Ajzen (2010) for more information.

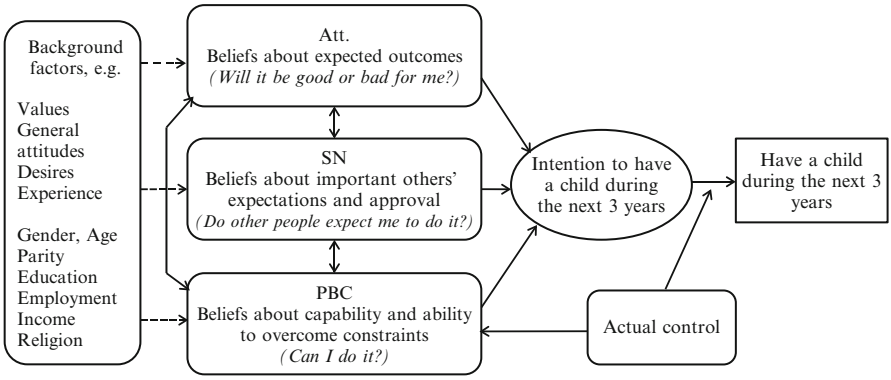

Fig. 1.3 The immediate antecedents of the intention to have a child during the next 3 years based on the Theory of Planned Behavior

Intentions are a fundamental concept in the TPB. Other measures of hypothetical fertility like desires and ideals are not explicit components of the theory. Intentions are formed on the basis of three determinants: attitudes (Att.), subjective (or perceived) norms (SN) and perceived behavioural control (PBC) over factors associated with the behaviour or outcome of interest. In the TPB, Att., SN and PBC are the only direct antecedents of intentions. Other factors, including external conditions (such as the state of the economy or institutional support, which might affect perceived control) or prevailing societal norms and personal characteristics (such as intelligence, personality, age, education, personal income and values) influence intentions only indirectly, via attitudes, subjective norms and perceived behavioural control. General fertility desires and ideals are among these background factors.

The representation of the TPB in Fig. 1.3 describes the formation of the intention to have a child by focusing on the three immediate antecedents of the decision. The outcome we are interested in is 'having a child during the next 3 years'. A rigorous application of the TPB requires a precise definition of the intended behaviour. It could, for example, be proceptive (e.g., pursuit of pregnancy, search for an adoption of a child) or contraceptive (use of contraceptive methods). The scheme in Fig. 1.3 is in line with the demographic tradition to use the outcome as a proxy for the behaviour. The focus is on a relatively short period (3 years in the figure) because short-term intentions are less likely to change than long-term intentions.

The outcome thus defined specifies all the other elements of the model listed in Fig. 1.3, which need to be expressed in similar or compatible terms. Therefore the factors that directly influence the intention are defined as:

- Att.: Attitude towards having a child during the next 3 years. This is the decision-maker's evaluation that having a child will have a positive or negative impact on his/her life. It effectively answers the question "Would it be good or bad for me to have a child some time during the next 3 years?"
- SN: Perceived social pressure to have (or not to have) a child during the next 3 years. SN represents the decision-maker's answer to the question "What do other

people or social institutions that are important for me expect me to do?" It can be formed by observation, conversation or subjective reasoning. Because it is subjective, it might, however, not be an accurate perception of what others think and thus differ from the general views of peers or the wider views of society for any given individual.

- PBC: Perceived control over factors associated with having a child during the next 3 years. This is the decision-maker's perception that she or he is able to have a child and to care for it. It can be considered an answer to the questions, "Can I do it? How easy (or hard) would it be?" It is worthwhile to dwell on this concept a little longer. The key element is *control*. For example, people with a low income who believe that they have sufficient financial resources to have a child will think they control this aspect of childbearing; on the other hand, people with a high income who believe they will not have enough money to pay for a child's upkeep will think they have little or no control. Financial status is not the issue: what matters is the conviction that you have sufficient financial resources to raise a child. Moreover, like SN, PBC is a *perception* and may not reflect reality: for example, few people who claim that they "don't know how to bring up a child" find they are actually unable to do so.

These three influences on having a child can be measured directly by asking questions about whether having a child would be a good or a bad thing, whether individuals feel a social pressure to have (or not to have) a child and how much control over having a child they think they have. Additional, more detailed, information about the factors that underlie Att., SN and PBC can be obtained by asking people about the following beliefs:

- Att.: The expected impact of having a child ('expected outcomes', also called 'behavioural beliefs').
- SN: The perceived social pressures exercised by important individuals (e.g., spouse, doctor) or groups to have or not to have a child ('normative beliefs').
- PBC: People's perceived ability to have and care for a child ('control beliefs'), includes their ideas about controlling internal factors such as their own health or ability to financially and emotionally care for a child and their perceptions of controlling external factors such as being able to meet a suitable partner and the availability of assistance with child care.

The arrows in Fig. 1.3 indicate how the three main antecedents are interrelated. For example, students may have a positive attitude towards having a child while social pressure might suggest that they postpone child birth until they have completed their education. Thus attitudes and subjective norms act in various directions in the formation of the intention to have a child. The final decision depends on the relative strengths of the three antecedents.

Figure 1.3 also shows how the reasoning process is connected with the actual constraints encountered in having and caring for children. PBC should, at least to some extent, reflect *actual behavioural control*, which is the individuals' actual (as opposed to perceived) situation such as their real financial situation, housing, health,

etc. considered through the prism of the behaviour in question. In Fig. 1.3, this is indicated by the arrow from actual control to PBC. Moreover, actual control plays a crucial role during the period that individuals and couples try to realise their already defined intentions. This influence is indicated by the continuous arrow from actual control to the path that points from intentions to outcome in Fig. 1.3.

Last but not least, Fig. 1.3 shows the influence of background factors. They include personal characteristics, which influence each of the three blocks that represent the proximate antecedents. In traditional demographic research on intentions based on regression models, these attributes are often used as explanatory variables that have a direct influence on intentions, rather than an indirect one via Att., SN and PBC.

The lower right box in Fig. 1.2 depicts the realisation of intentions, the outcome that is shown at the right hand side of Fig. 1.3. Empirical research on the realisation of intentions requires additional information about the outcome, i.e., whether the individual did or did not have a child 3 years later. Longitudinal surveys provide this information, which has been used for the research reported in Chap. 4. According to the TPB, actual control plays an important role in the realisation of intentions. In Fig. 1.3 this is indicated by the arrow from intentions to outcome, which corresponds to the arrow from micro-level decisions to fertility behaviour in Fig. 1.2, except that outcome serves as a proxy for the behaviour.

Studies can thus illuminate the factors that define the impact of actual control on the realisation of intentions and how individuals succeed or fail to cope with them. This information can be valuable for better understanding the obstacles people encounter in their attempts to realise their childbearing intentions. Chapter 4, and in particular Chap. 5, deal with this topic in more depth. It should be noted that the frustration of the intention not to have a child leads to unintended pregnancy and ultimately to unintended birth. This outcome is covered by the TPB in the same way as outcomes related to intentions to have a child.

The application of the TPB to studies of fertility intentions requires further work on the precise definition and measurement of crucial concepts and theoretical links in surveys. Moreover, the TPB is a theory of reasoned behaviour while some births appear to be the result of unreasoned behaviour (i.e., accidental births that were neither intended nor unintended). These issues recently raised a significant debate, which is reflected in eight articles published in the 2011 issue of the Vienna Yearbook of Population Research.

1.6 The Macro-Micro Link: Fertility Intentions in Context

In this section we discuss the macro-level context of the formation of fertility intentions. The macro-micro link refers to the left arrow pointing downward in Fig. 1.2.[3]

[3] This description draws heavily on Philipov et al. (2009).

The TPB offers a rich heuristic framework to discuss the ways in which the context can influence fertility outcomes. The regression equation that is generally used to predict people's intentions may serve as starting point:

$$\text{Intention} = \beta_1 \text{Attitude} + \beta_2 \text{Subjective Norm} + \beta_3 \text{Perceived Control}$$

In general, there are at least three analytically different ways in which the context can 'enter' into this equation. First, it can influence the scores of individuals on the attitude, subjective norm and perceived control variables. Affordable high-quality public child care is a good example. Its availability might influence individuals' attitudes, subjective norms and perceived control. As a result, they may perceive the costs of having children to be lower, as it will be easier for them to combine parenthood and paid employment and to regain some autonomy over their own leisure activities. Public child care may also increase the perceived benefits of having children by enabling individuals to focus more strongly on 'quality time' with their children. This reasoning gives rise to the expectation that individuals with good access to high-quality child care will have more positive fertility attitudes than those with no or only limited access to this service. The availability of high-quality child care may also influence individuals' subjective fertility norm. If it is available, significant others like parents and friends may tell them that there is little point in delaying childbearing. As a result, individuals may feel a higher normative pressure to have a child relatively soon. Last but not least, it is very likely that the availability of high-quality child care also influences the perceived control of most individuals' childbearing decisions.

A second way in which the context can influence the intention equation is by adjusting the 'weights' (β_1, β_2 and β_3) attached to individuals' scores on the attitude, subjective norm and perceived control variables. For instance, if the availability of high-quality child care increases in a country, people may attach less importance to their parents' opinions about childbearing, because they are less dependent on their informal support. In conjunction, the relative weight of individuals' own attitudes in forming a childbearing decision may increase.

In addition, the TPB points out a third way in which context can influence decision-making. To the extent that a change in the context leads to a change in the perceived or actual control over childbearing behaviour, it will also influence the link between intention and behaviour (see Fig. 1.3). If the availability of affordable and high-quality child care increases, it might become more likely that individuals will actually realise their childbearing intentions.

The equation above can be enlarged to include interaction terms between the three antecedents, which reflect their interrelations and are depicted by bi-directional arrows in Fig. 1.3. For example, more good-quality child care increases perceived control as discussed above. In turn, this enforces the individual's positive attitudes towards having a child.

1.7 The Micro-macro Link: How to Integrate Both Levels?

The macro-level comprises links between macro-level factors and fertility rates. However, even if we only take into account the unidirectional connection, they cannot be interpreted unambiguously in terms of causalities. In Sect. 1.4, we discussed the ecological fallacy and compositional effects, which may lead to misinterpretations of statistically established links. The micro-macro approach is a convenient way to alleviate these problems and reach meaningful conclusions about causalities at the macro-level. In this section, we briefly discuss several mechanisms for research in this domain.

Two types of studies may prove useful. In so-called *comparative micro-studies*, the same kind of multivariate analyses are performed on comparable micro-level datasets from different countries. By comparing similarities and differences across countries and drawing on knowledge about potentially important macro-level differences between the countries, inferences are made about macro-factors that potentially explain the observed pattern of similarities and differences (Corijn and Klijzing 2001; Blossfeld et al. 2005). Alternatively, the selection of countries is guided by theoretical ideas about the potential importance of a macro-level factor and the observed pattern of similarities and differences in the micro-level analyses is used to ascertain whether or not the macro-level factor can explain the pattern. If so, this is interpreted as support for the relevance of the macro-factor under consideration (Liefbroer and Corijn 1999).

Although potentially interesting, this approach suffers from a number of weaknesses. First, it does not permit assessing the extent to which countries differ in the analysed processes. Second, there is no formal testing of whether a specific macro-level factor is able to explain the respective differences across countries. Third, no additional potential macro-level factors can be taken into account. Fourth, it is not possible to examine whether differences across countries mainly result from compositional variation or can be interpreted as genuine context effects (Moore and Vanneman 2003).

A second way in which macro and micro-levels of analyses can be combined is through multi-level analyses (Kalwij 2010; Testa and Grilli 2006; Adsera 2011). This approach pools data from multiple countries into one dataset and includes characteristics at the micro-level (e.g., age, educational attainment and religiosity) and at the macro-level (e.g., GDP and female labour force participation rates) as predictors of fertility-related individual-level outcomes such as having a child, childbearing intention or fertility norms. Proper care is taken to account for the dependence of observations at the macro-level. This approach has a number of attractive features. First, it allows us to estimate the proportion of variation in fertility outcomes that occurs at the macro-level. This offers the possibility of assessing whether differences across countries are relatively large or relatively small, compared to differences within countries. Second, it permits estimating the strength of the relationship between specific macro-level factors and the fertility outcome of interest. It can be tested whether the strength of this relationship is statistically significant and how much of the variation across macro-level units can be attributed

to the macro-factor under consideration. Third, this approach can be used to examine so-called cross-level interactions, i.e., interaction terms of a macro-level and a micro-level variable. Such cross-level interactions show whether the strength of micro-level variables differs across different levels of the macro-level factor. An example is the question of whether attitudes towards childlessness depend on the diffusion of the Second Demographic Transition in a country (Merz and Liefbroer 2012).

However, this approach is not without limitations either. The number of macro-level units has to be sufficiently large to be able to include macro-level indicators. This is often a problem in country-comparative research as comparable data are only available for a restricted number of countries. Even if the number of countries is large enough to include macro-level indicators (e.g., 15 or more countries), the number of countries is often still so small that one can only include one or a very limited set of macro-level indicators. This significantly limits the possibility of discriminating between competing explanations. Chapter 6 discusses findings related to the application of these methods.

1.8 Outline of the Book

The outline of the book basically follows the sections in this chapter. In Chap. 2, Olivier Thévenon starts off with a discussion of differences in family policy regimes across Europe. Family policies can be seen as one of the key macro-level determinants of fertility trends in economically advanced societies. In addition, such policies set the institutional parameters within which individuals and couples make fertility decisions.

In the next two chapters, the attention is squarely on the micro-level decision-making process and its outcomes. In Chap. 3, Jane E. Klobas and Icek Ajzen discuss fertility intentions in context. They give a detailed overview of the Theory of Planned Behavior and report a series of important cross-national findings based on the application of the TPB in Generations and Gender Surveys (Vikat et al. 2007). In Chap. 4, Zsolt Spéder and Balázs Kapitány discuss the realisation of fertility intentions, in a comparative perspective. Using longitudinal data, they pay particular attention to factors that lead people who initially intended to have a child to either postpone or abandon that intention. Chapter 5 presents qualitative analyses of reproductive decision-making. In this chapter, Laura Bernardi, Monika Mynarska and Clémentine Rossier report on a series of cross-national qualitative surveys in which they examined the accounts Europeans give about their fertility decision-making processes. Chapter 6 is dedicated to the connection between the macro and the micro-level. Aart C. Liefbroer, Eva-Maria Merz and Maria-Rita Testa discuss the ways in which macro-factors influence micro-level decision-making. These processes are illustrated by studying cross-national differences in fertility norms using data from the European Social Survey. Finally, Chap. 7 summarizes the main results of the REPRO project presented in this volume and discusses potential avenues for future research.

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Chapter 2
Institutional Settings of Childbearing

A Comparison of Family Policy Development Across OECD Countries

Olivier Thévenon

2.1 Introduction

Chapter 1 has shown that after decades of continuous decline birth rates in many European countries have started to rise again since the early 2000s. This decline was mainly caused by the postponement of childbirth among the younger generations, with the average age of women at childbirth in the OECD increasing from 27.2 years in 1970 to 29.9 years in 2008. Social change and economic development were key drivers of this process: young people are enrolled in education for longer periods, with a stronger focus on autonomy before starting a family; more women are active on the labour market and young households often wish to secure their economic situation before having children (Myrskylä et al. 2009; Lesthaeghe 2010). In recent years, however, fertility rates have started to rise again in most economically advanced countries. This development is mainly driven by a rise in birth rates above age 30; the fertility decline due to the 'postponement' of childbirth has approached its limits (Goldstein et al. 2009). Yet, the current economic recession has stalled the upturn of fertility trends in many European countries and entails consequences that are still uncertain in the long run (Sobotka et al. 2011).

Interestingly, this increase in fertility rates has been steeper in countries where female labour market participation has also risen markedly and where women have more opportunities to combine work and childbearing (Luci-Greulich and Thévenon 2014). Hence fertility rates are now higher in countries with high rates of female employment, while the opposite situation prevailed 30 years ago. Previous research emphasised the contribution of family policies to this upturn (Gauthier 2007). In particular policies that help parents to balance work and family life are found to encourage fertility (Thévenon and Gauthier 2011).

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Family policies are, however, diverse because countries have different histories and different policy priorities (OECD 2011; Thévenon 2011).[1] These policies target a range of objectives such as reconciling work and family responsibilities, mobilising female labour supply and promoting gender equality as well as ensuring the financial sustainability of social protection systems, combating child and family poverty, promoting child development and enhancing child well-being throughout the early life course. The design of family policy may vary and reflects the different levels of priority attributed to these objectives.

Not all policies succeed in promoting the conditions necessary for individuals to start or enlarge a family. A key differentiating characteristic is the extent to which policies targeting families offer a mix between financial assistance, entitlements to leave work after a birth and the provision of child-care services.

This chapter considers the different settings by looking at three core components or levers of family policies in the OECD countries which can have an important effect on childbearing preferences: (a) financial transfers to supplement family income, (b) leave entitlements to enable working parents to care for their child(ren) and (c) the provision of child-care services. It assesses differences in their key characteristics as well as the extent to which a combination of these forms of support may influence fertility behaviour. Three main questions are addressed:

- How has policy support for families evolved over the past decades? Key characteristics of support will be compared at different points in time to track relevant trends.
- Do these policies support specific types of families, (one-earner or two-earner couples, number of children)?
- Are policy packages sufficient to secure the environment needed to start family formation or to enlarge the family? Special attention will be paid to the combination of resources in terms of time, money and services available to parents over the life course of a child.

Section 2.1 reviews how policies directed towards early childhood developed over the past three decades by considering each type of intervention along the three levers: family-related financial transfers, parental leave entitlements and the provision of child-care services. It shows that the scope of policies for families with children has been broadened in many countries, but there are still large differences across countries regarding the extent and type of support. Section 2.2 sheds light on these differences and explains how the different types of policy support complement each other. It underlines that the main difference concern the support given to working parents with children aged below three to either stay in the labour force or to choose between work and having a child. Section 2.3 discusses the characteristics of family policy packages that are likely to affect fertility behaviour.

[1] These differences are also documented by a large number of references, e.g., Gornick et al. (1997), Esping-Andersen (1999), Korpi (2000), Gauthier (2002), Meulders and O'Dorchai (2007).

The main source of data is the OECD Family Database (www.oecd.org/social/family/database) but other sources are also used. Policies and policy instruments can be defined at different ages of children within a single country and also across countries. To ensure consistency, the policy analyses in this chapter refer to different child ages while these ages are consistent across countries.

2.2 The Three Levers of Family Policies in OECD Countries

Money, time and child-care support are key resources required by households wishing to have and raise children. As child costs rise, children become less affordable for actual and potential parents. However, governments provide households with resources that reduce the private cost borne by parents who raise children. Financial transfers, leave entitlements and spending on child-care services are the three main policy levers that governments may use to supplement families' resources. The mix between these different types of support varies across countries as family policies may reflect different priorities and target different groups of families in each country.

2.2.1 Increasing Expenditures for Families

Before discussing each of the three policy levers separately, this sub-section looks at overall public expenditures for families. Expenditures made by governments for families have grown since the early 1980s, with an especially significant increase in funds for formal child-care services used by working parents as a substitute for parental care (OECD 2011). Cross-country differences in the policy mix established to support family well-being and the work-life balance remain quite large, however, and only partially match the standard classification of welfare states (Thévenon 2011; see below).

Figure 2.1 shows the proportion of the gross domestic product (GDP) governments spend for families (disregarding expenditures on compulsory education).[2]

[2] Expenditure includes child payments and allowances, parental leave benefits and child-care support. Spending on health and housing support also assists families, but is not included here. No data on tax breaks for Estonia, Greece, Hungary and Slovenia. Tax breaks are not used in Denmark, Finland, Iceland, Italy, Luxembourg and Sweden. Coverage of spendings on families may be limited as such services are often provided and/or co-financed by local governments. This leads to large gaps in the measurement of spending in Canada and Switzerland. Local governments also play a key role in financing child care. This can make it difficult to get an accurate view of public support for child care across a country, especially but not exclusively in those with a federal structure.

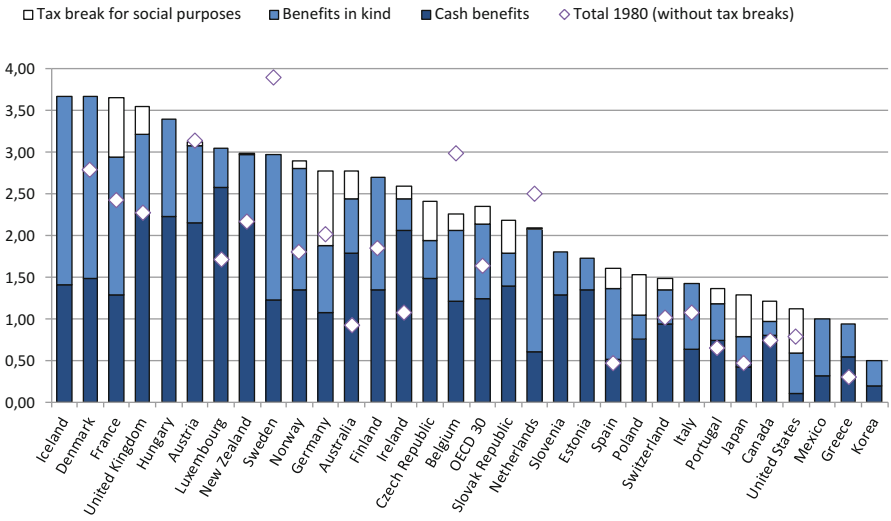

Fig. 2.1 Spending on families and children as percentage of GDP, 2007, countries ranked in decreasing order of total family benefit spending in 2007 (OECD average is the unweighted average of all available OECD countries; data for Australia and Turkey are missing. Estimates for 1980 are based on social expenditures data and do not include tax breaks)

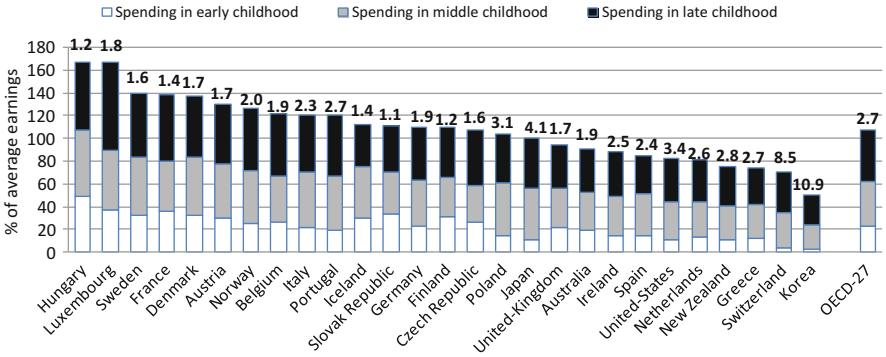

Fig. 2.2 Total public spending per child as a percentage of median earnings, 2003 (Numbers above bars are ratio of spending on middle and late childhood (7–17) to early childhood (0–6); author's calculations, OECD 2009)

In the OECD, this share rose from an average of around 1.6 % in 1980 to 2.2 % in 2007, although the amount countries actually spend on child and family policies still varies considerably. In 2007, Denmark, France, Iceland and the United Kingdom allocated more than 3.5 % of their GDPs to family support, as compared with slightly more than 0.5 % in South Korea, for example.

The breakdown of spending over childhood also varies widely across countries. Figure 2.2 illustrates the variations in governments' spending, including preschool and compulsory education, with a breakdown into three periods: early childhood

(0–6 years), middle childhood (7–11 years) and late childhood (12–17 years). In Switzerland, for example, the total amount spent per child is about 70 % of average earnings and less than half the amount spent in Hungary. The figure also shows total spending for middle and late childhood (7–17) as compared to spending for early childhood years (0–6). Most countries spend proportionately much more on middle and late childhood than on early childhood.

2.2.2 Financial Transfers

The breakdown of spending into broad categories of policy instruments also varies greatly across countries. The variations relate to differences in the orientations and priorities set by governments regarding the different policy goals (Thévenon 2011; OECD 2011).

Financial support can be provided in the form of cash benefits or child-related tax breaks. Cash benefits are twofold: some are paid out after a birth in the form of birth grants or payments to parents who take leave from employment after a birth. Other benefits are given to parents on a regular basis. They mainly include family allowances, child benefits or working family payments. A number of OECD countries also include one-off benefits such as back-to-school-supplements or social grants (e.g., for housing) in this category. Overall, cash payments are often the main group of expenditures, representing 1.25 % of the GDP, on average, and over 2 % in Austria, Hungary, Iceland, Luxembourg, New Zealand and the United Kingdom (Fig. 2.1).

A comparison of spending per child and GDP per capita gives a better idea of actual government efforts to support families with children, because spending in percentage of GDP depends on the size of the population that contributes to the gross domestic product and on the number of children. Figure 2.3 shows the cash benefits spent for each child under age 20 relative to the average gross domestic

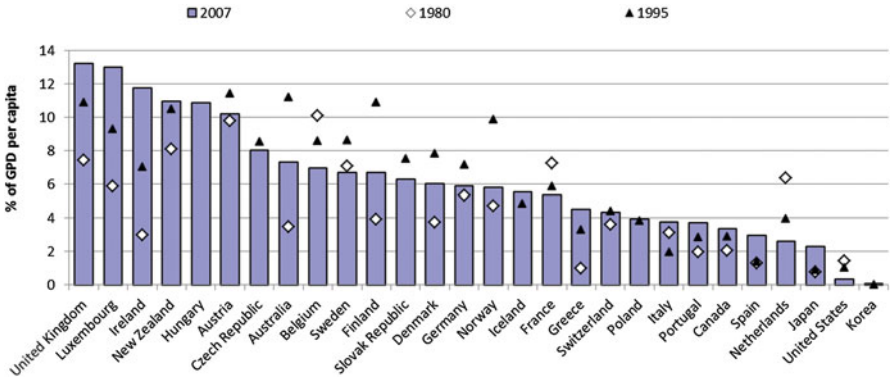

Fig. 2.3 Spending on cash benefits per child under age 20 in percentage of GDP per capita (author's calculation based on OECD Social Expenditures Database)

product per capita (birth grants and leave benefits received by parents of a newborn child are not included here but are illustrated separately in Fig. 2.9).

Interestingly, two English-speaking countries hold opposite positions: the United Kingdom, on the one hand, shows the highest in-cash expenditures per child, while the United States, along with Korea, rank lowest in this respect. Although the average amounts spent per child increased between 1980 and 2007, expenditure decreased in several countries during the past decades. More precisely, average spending has decreased in about one third of all countries since the mid-1990s. The larger number of children covered by policies – notably due to the fertility 'rebound' – might partly explain this downward trend, together with the increase in the GDP per capita that contributes to lowering the relative share of spending on cash benefits. By contrast, in many countries expenditures on leave and child-care services have increased over this same period thus offsetting the relative decline of cash benefits (see below).

Child-related tax breaks are also a widespread means of supplementing family incomes. Only six of the 32 OECD countries grant no specific tax breaks to families. Where these transfers do exist, they involve different mechanisms, including tax allowances on earned income and tax credits to support contracting services such as child care. The large majority of OECD countries provide such tax breaks, but their relative share in the overall support given to families varies widely (Fig. 2.1). Tax breaks are the main mechanism of family support, for example, in the United States and constitute an important share of financial transfers to families in France and Germany.

To what extent do financial transfers (through cash benefits and tax breaks) help to reduce the 'direct' cost of raising children? To answer this question, we study the increase in disposable income generated by tax and benefit transfers given to families with children as compared to childless households with the same earnings. Of course, these transfers vary with household composition and earnings. Figure 2.4 illustrates the increase in net income of 'traditional' single-earner families with two children and average earnings. The situation of two-earner families is discussed thereafter. The difference in disposable income due to children is highest in the United Kingdom where the income of one-earner couples with two children is 28 % higher than that of childless households. In Spain, where in-cash support is rather low in general, the difference is only 5 % up (Fig. 2.1).

This specific form of support has evolved differently across countries. In most cases, it has increased since the early 1980s, with an impressive rise in the United Kingdom, but has declined significantly in Finland, the Netherlands and Norway, while remaining quite stable in France and Sweden.

Variations in the level of support depending on family size also differ between countries. The 'family size ratio' in Fig. 2.5 shows the additional benefits households receive for a third child as compared to equivalent households with one child only (comparisons with two children instead of one would reveal similar but less pronounced differences). This information is not available for all European countries, but family support is likely to specifically target large families in Belgium, France and Sweden. By contrast, family benefits are less predominantly earmarked

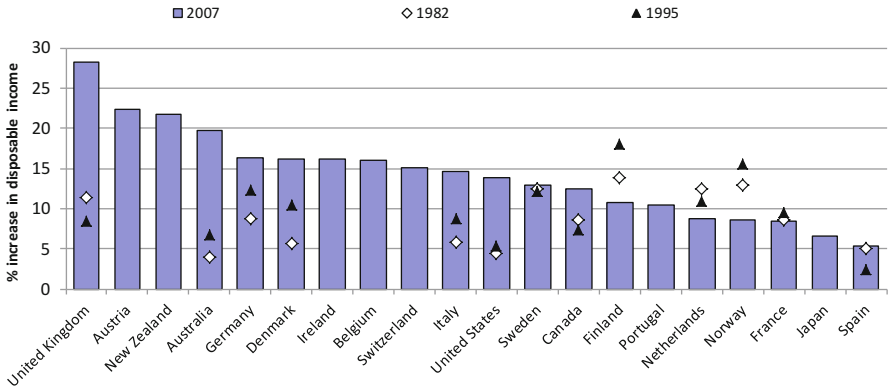

Fig. 2.4 Increase in disposable income due to financial transfers (percentage of the income of a childless couple for a single-earner couple with two children and average earnings; author's calculation based on OECD Social Expenditures Database)

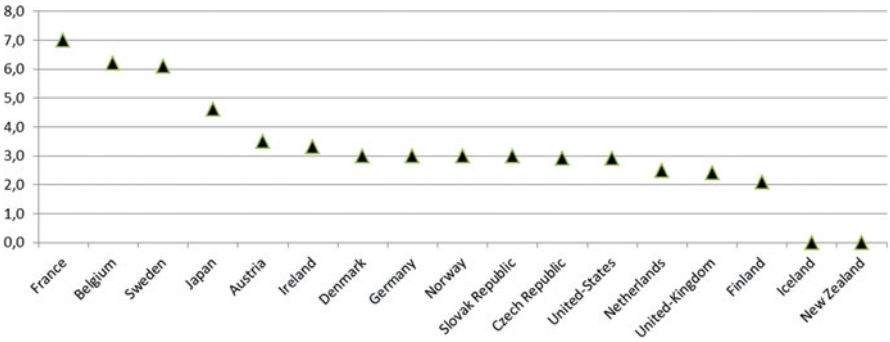

Fig. 2.5 Per-child supplement received by a family with three children as compared to one-child families (relative difference in the supplement of income after tax and benefits given to couples with three children compared to the supplement of net income given to couples with the same earnings and one child; the ratio is based on two-earner couples with average earnings and children aged 7–14 years; estimates from the Bradshaw and Finch dataset on the transfers received by families, broken down by family type, see Bradshaw and Mayhew 2006)

for large families in Finland, the United Kingdom or in Iceland and New Zealand where families with three children receive a per-child supplement equal to that received by one-child households. The overall spending in cash benefits gives priority to all poor families in most of these countries (Thévenon 2011; OECD 2011).

It is also worth comparing the extent to which tax and benefit transfers modify the financial return of paid work. Households' allocation of time between care and paid work and the division of labour between partners might react to the incentives generated by these transfers. In particular the participation of women in paid work might depend on the relative gain in disposable income of two-earner families as compared to one-earner households with the same initial earnings. Figure 2.6 compares

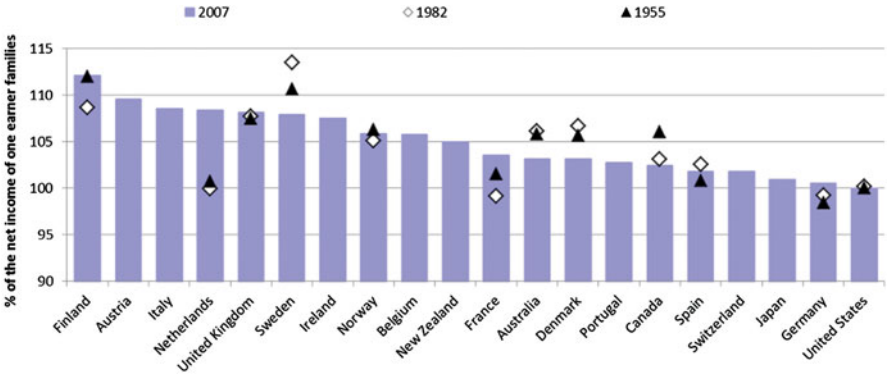

Fig. 2.6 Disposable income added by a second earner as per cent of net income of a one-earner household (illustrates the difference in household disposable income between a situation where husband and wife share earnings (100 % and 33 % of the average earnings respectively) and a situation where the husband earns the entire household income (133 % of the average earnings), for a couple with two children (Source: OECD tax and benefit data))

the ratio of two-earner to one-earner net income for a family with two children and earnings equal to 133 % of the average wage. In the two-earner family, the second earner works part-time and receives earnings equal to one third of the average wage. Values above 100 indicate that a second earner working part-time is financially more advantageous than a situation where all income is earned by one breadwinner. Household net income is higher for two-earner families in all countries, except in Germany and the United States where tax rates are very similar for one-earner and two-earner families.[3] Note, however, that this figure does not include child-care costs which can significantly alter the relative gain for two-earner families (OECD 2011).

2.2.3 Child-Related Leave Entitlements

Leave entitlement after childbirth is a second broad category of parental support. Employment is protected during leave so that parents can resume work after taking time off to care for a newborn infant. Different types of leave entitlement can often

[3] Figure 2.6 illustrates one particular case, but transfers and their consequences on effective tax rates vary with income level and the number and age of children (OECD Family database, PF1.4). Germany is the only country where the tax/benefit system significantly favours single breadwinner couples over dual-earner families, at both levels of earnings, and particularly at higher earnings. This is due to the fact that in Germany social security contributions are capped in such a manner that a couple family with two adults who earn an average wage pays about EUR 7,000 more in social security contributions than a couple family with a single breadwinner who earns twice the average wage. Similar effects exist in the tax/benefit systems of France, Iceland and the Slovak Republic, but at this earnings level the effect of the caps is comparatively small. Moreover, it is lowered by the individual nature of the tax systems in Iceland and the Slovak Republic.

be combined. First, working mothers are entitled to a period of maternity leave (or pregnancy leave) around the time of childbirth which protects the health of the working mother and her child and guarantees that she can return to her job within a limited number of weeks after childbirth. Across the OECD, the average duration of maternity leave was around 19 weeks in 2007. Maternity leave is paid in almost all countries, except in the United States where there is no central government legislation on paid leave (for details see OECD 2011, indicator PF2.1).[4] Fathers are also entitled to paternity leave at the time of childbirth, but these entitlements cover a short period that varies from five to 15 days following the birth.

Parental leave entitlements that supplement the basic rights to maternity and paternity leave vary substantially across the OECD. These variations exist because leave policies are designed to address different concerns (Kamerman and Moss 2009): economic concerns, since they affect labour market participation and regulation; social concerns for the health of working mothers and their children, the physical and emotional development of children and gender equality; and demographic concerns, since the parents' availability to care for their children might also influence fertility decisions.

There are also large differences in the length of parental leave and the conditions of leave payment across the OECD. These differences have been quite constant (or even increased) over time. Strikingly, working parents are entitled to a much longer period of parental leave in countries which pioneered the introduction of employment-protected leave for both parents during and after maternity leave (Fig. 2.7). Parents are entitled not to work for at least around 2 years, but frequently up to 3 years. These periods of parental leave are usually taken just after maternity leave, though in some countries they can be taken when the child is much older (often up to age eight).

The following notes provide more detail for comparison among the countries in Fig. 2.7:

- The total number of weeks includes entitlements to paid and unpaid leave. In some countries (Czech Republic, Norway) the totals refer to parental leave and subsequent longer periods of paid and unpaid leave women can take to care for their young children after maternity leave (sometimes under a different name, e.g., child-care leave or home-care leave).
- In some countries there are different payment options and hence different periods for which a benefit is received. The figure shows the option with the longest benefit period. In Australia, a parent can request to take up to an additional twelve months (of their own or of their partner's unused leave period) after the first 12-month-period of leave. In Canada, the federal Employment Insurance programme grants 35 weeks of paid parental leave; unpaid leave periods can be longer. For example, the province of Québec grants up to 52 weeks of unpaid leave. During this period, eligible clients can claim benefits under the Québec Parental Insurance Plan. In the Czech Republic, parental benefit can be received until the child is 48 months old,

[4] In Australia, paid leave was introduced on 1 January 2011.

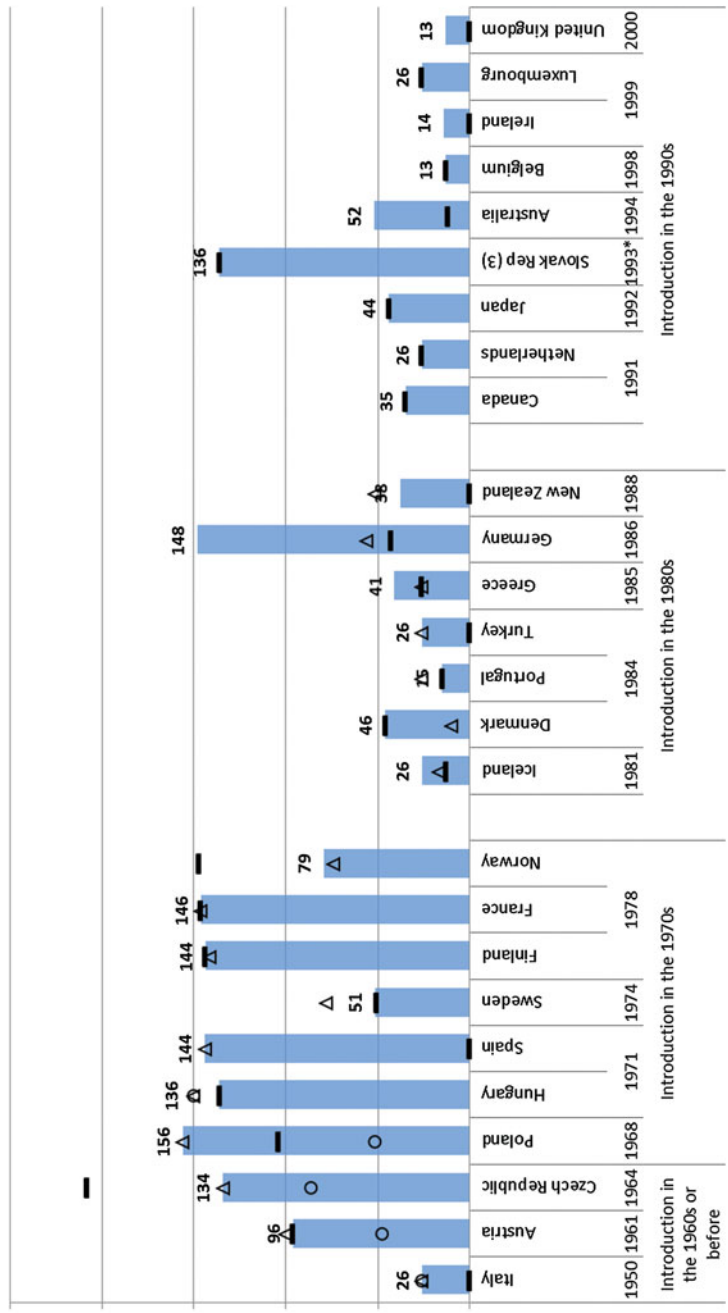

Fig. 2.7 Number of weeks granted as a period of job-protected parental leave

while the job-protected period of leave ends at month 36. In Germany, parents are entitled to a leave of up to 3 years, but the period of payment is limited: an income-related 'parental benefit' (Elterngeld 1) is paid for a period of twelve months (plus two months bonus if the father takes at least two months). Instead of 12 (+2) months, the parental benefit may be spread over 24 (+4) months. In the Netherlands, payment is not made as benefit but through a tax credit. In Norway, there are 36 weeks of paid parental leave, which can be taken by the mother, plus 52 weeks of unpaid job-protected leave. However, a cash-for care payment can be received until the child has reached his/her third birthday. In Sweden, a municipal child-raising allowance (vårdnadsbidrag) was reinstituted in 2008 in addition to the statutory period of leave. As of 2009, municipalities may choose whether or not they provide a benefit for parents having a child aged one to three who do not use publicly funded child-care services and for whose child 250 days of parental leave have already been used. In Poland, the basic payment covers 24 months, but the period can be extended to 36 months in case there is more than one child.

- Slovakia was governed by the leave legislation applying in the Czech Republic. From 1993 onwards, it implemented its own legislation.

Among the countries which pioneered parental leave entitlements, only Sweden and, more significantly, Germany have reduced the duration of leave while increasing the level of payment. This shows a clear change in policy orientation towards a shorter period of leave with earnings-related payment.

As payment is a key determinant of uptake, parental leave is paid in almost all countries except the United States, the only OECD country today with no statutory compensation payment. Payment conditions vary across countries, however. Long leave periods are generally associated with flat-rate family-based payment, so that only one parent claims payment while on leave. Shorter periods of parental leave are often associated with earnings-related payments that guarantee a higher wage replacement rate up to a ceiling (for details see OECD 2011, indicator PF2.4). Under such schemes, high earners and men are more likely to claim part of the entitlements. However, as leave payments do not fully replace the leave-taker's wage and women very often earn less than their partners, they are more likely than men to take all or most of the leave. Moreover, women most often do so to care for an infant after the end of their maternity leave. In this case, they may not be in the labour force for a long period. Thus, for women who were employed before childbirth, the opportunity cost of a child caused by work interruption becomes quite high. Figure 2.8 adds paid weeks of parental leave to those of maternity leave entitlements and shows that women can take paid leave for three or more years in six countries (Austria, the Czech Republic, Finland, France (for the birth of a second child), Hungary and the Slovak Republic). In the other countries, the total periods of paid leave are much shorter – one year or less – because paid parental leave is shorter.

As illustrated in Fig. 2.9, differences in leave entitlements lead to substantial variations in the amounts spent per childbirth. These amounts include the 'birth grants' paid in some countries around childbirth to cover childbirth expenses. Spending per birth relative to GDP per capita is especially high in the Czech Republic and Hungary where parental leave is comparatively long.

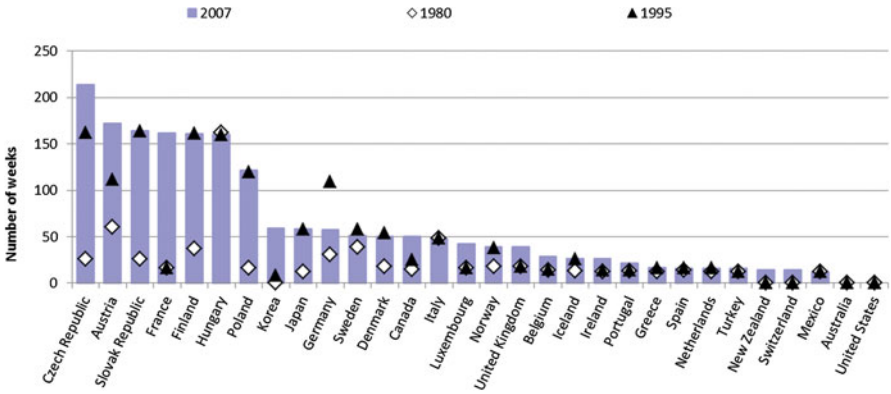

Fig. 2.8 Number of paid weeks for child-related leave (mothers, 1980, 1995 and 2007; countries ranked by number of paid weeks available in 1980; includes maternity and parental leave women can take after maternity leave and, when relevant, weeks of childcare or home-care leave (Source: OECD Family Database))

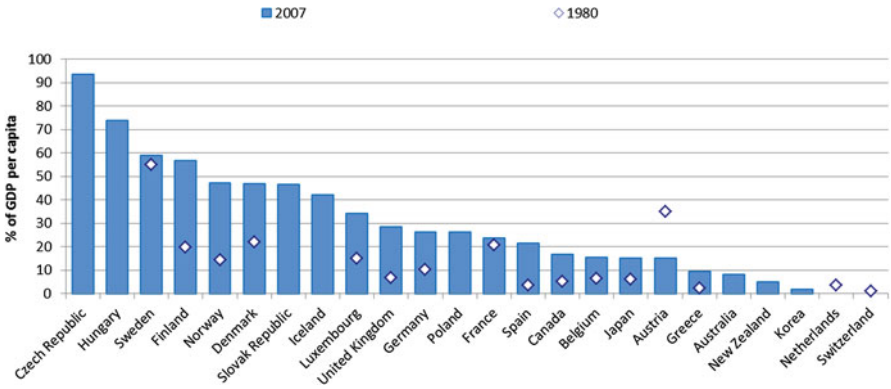

Fig. 2.9 Spending on child-related leave per childbirth in per cent of GDP per capita, 1980, 2007 (2006 for Italy, 2004 for Portugal; author's calculation based on OECD Social Expenditures Database)

2.2.4 Child-Care Services

Finally, child-care services that parents can substitute for personal care are also resources that might influence the decision to have children and to combine work and childbearing. Governments play a key role in subsidising the provision of child-care services. Trends over the past two decades show that countries have favoured expanding in-kind benefits over cash transfers and spending on education (OECD 2011). Nevertheless, in-kind expenditures for children under age three amount to an average of just below 0.9 % of the GDP in the OECD, which corresponds to roughly one third of the total expenditures for families (Fig. 2.1). Denmark, France, Iceland, Finland and Sweden are the 'big' service providers, with in-kind expenditures

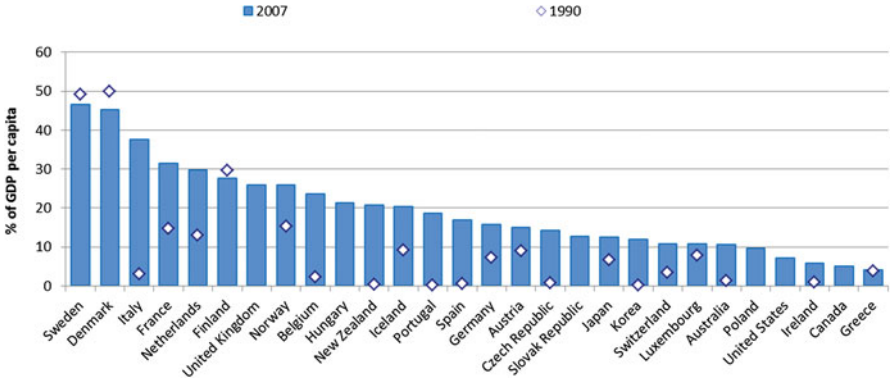

Fig. 2.10 Spending on child-care services per child under age 3, percentage of GDP per capita, 1990, 2007 (2006 for Portugal; figures include childcare and day-care services, home help for families and a suite of family social services (Source: OECD Family Database and data collected by the author))

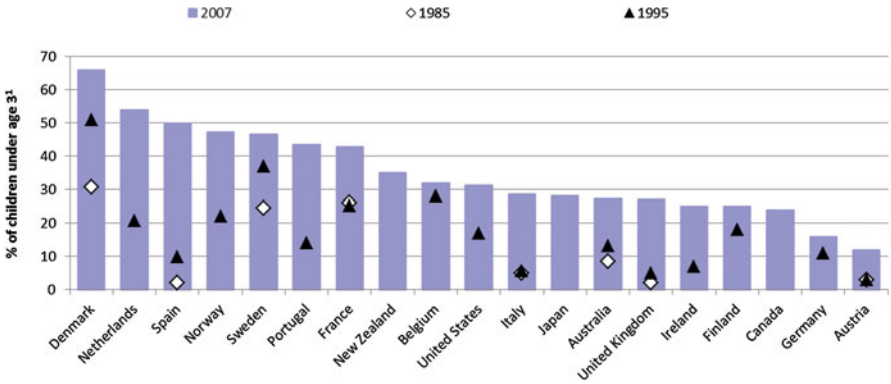

Fig. 2.11 Proportion of children under age three enrolled in formal child-care services (Source: OECD Family Database and authors' collection)

exceeding 2 % of the GDP in total, i.e., more than twice the OECD average. These expenditures can be measured per child under age three and expressed in percentages of the GDP per capita to compare the share of income per inhabitant actually devoted to the provision of child-care services (Fig. 2.10). In this respect, Denmark, Italy and Sweden are the three countries with the highest shares of income per inhabitant spent for child-care services.

As illustrated in Fig. 2.11, the expansion of service coverage for children below age three is one consequence of the increasing investment in child-care services. Differences in participation rates are, however, still large between Denmark, where about two thirds of all children below age three have a place in a day-care centre, and Germany and Austria, which are at the other extreme. In Austria, care services cover no more than 12 % of all preschool children.

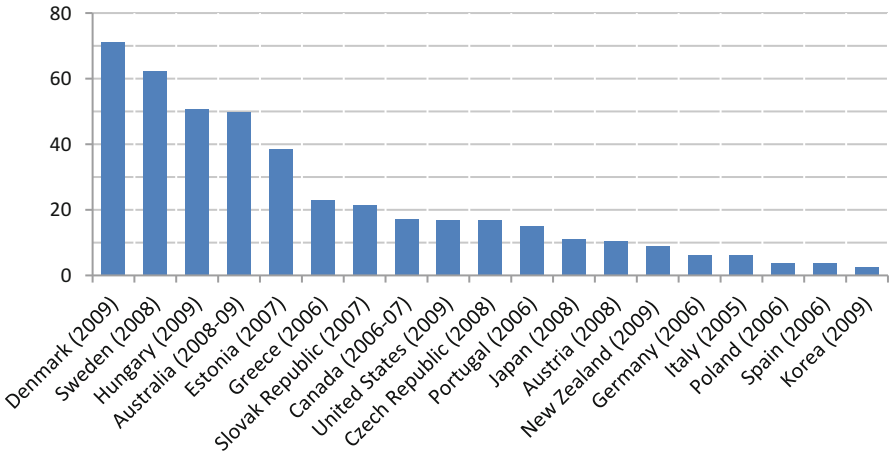

Fig. 2.12 Proportion of children aged 6–11 attending out-of-school-hours care services, 2008 (children aged 5–11 in Germany, 6–11 in Australia, 5–13 in New Zealand, 6–9 in Canada, 6–13 in Italy, 6–14 in the Czech Republic and the Slovak Republic) (Source: OECD Family Database)

In balancing work and family, the provision of out-of-school care services is also important for parents of school-aged children. Figure 2.12 shows that the percentages of children covered by these services vary between countries, with Denmark and Sweden having much higher rates than the other European countries.

To sum up, over the past decades, OECD countries have considerably increased their expenditures to support families. All types of support have been expanded to some extent: ever since the early 1980s, in-cash transfers for families with children have been raised in many countries, but the relative share of the GDP per capita invested per child has grown at a slower rate since the mid-1990s or even decreased in some countries. In turn, in the large majority of countries, 'traditional' households with two children and average earnings now receive a higher compensation for the cost of raising children than a few decades ago: compared to 30 years ago, their income is now more generously supplemented by tax and benefit transfers relative to childless households.

Leave entitlements for working parents have also been extended, but parental leave policies vary widely across countries. Overall, there are two types of leave schemes: First of all, countries which pioneered the introduction of parental leave entitlements provide comparatively long periods of leave (up to 3 years) with flat-rate payments, which might, however, make a return to the labour market difficult, especially for low-qualified women. Secondly, countries that introduced leave entitlements later and/or reformed them recently (e.g., Germany) offer shorter periods of leave, often combined with earnings-related payments and special incentives for fathers to take parental leave. This second type of leave scheme promotes a combination of work and family life for both parents and encourages mothers to participate in the labour market. Overall and over time, there is a polarisation between countries with respect to the two leave schemes. Only Germany radically changed its leave policy scheme from the first to the second type, which drastically

reduced the number of paid leave weeks from 2007 onwards (a period not covered in the present study).

Last but not least, as a consequence of a growing demand for child-care services, expenditures 'in-kind' have increased over the last decade and led to a much wider provision for infants and pre-school children. However, the percentage of children below age three enrolled in formal child-care services still varies widely and is particularly low in German-speaking and eastern European countries.

2.2.5 A Diversity of Family Policy Patterns

As we have seen, there are remarkable differences in the way policy instruments are combined to provide support for families. These differences are rooted in the countries' welfare state histories, their attitudes towards families, the government's role, current family outcomes and the relative weight given to the different yet interdependent family policy objectives. They also concern the extent and type of support provided to working parents with children under age three. Thévenon (2011) provides an in-depth discussion of cross-country differences and similarities in the policy mix accomplished to support families in OECD countries. Country classifications of family policy partially corroborate Esping-Andersen's standard categorisation of welfare states (Esping-Andersen 1999) though with considerable heterogeneity within the respective groups and as well as outliers.

The findings can be summarised as follows: the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) provide comparatively comprehensive support for working parents with very young children (under age three). In this respect, they clearly outdistance the other OECD countries. Support is provided through a mix of relatively generous leave arrangements for working parents after the birth of a child and widely available child-care services. English-speaking countries (Ireland and United Kingdom in Europe, but this group also includes Australia, Canada, New Zealand and the United States) provide much less support in time and in kind for working parents with very young children, while financial support is more generous but primarily targeted to low-income families and preschool children. As seen above, not all of these countries offer the same level of support, with Canada and the United States lagging behind the others. Continental and eastern European countries are a more heterogeneous group with a more intermediate position. Among these countries, France and Hungary stand out by offering rather generous support for working parents as compared to the other countries in their respective groups.

One drawback regarding the above description of policy settings is due to the fact that many countries have multifaceted policies and promote the coexistence of different options to balance work and family. Actually, the guiding principle for policy action is to give parents the freedom to choose between parental care or a substitute that allows them, and in particular mothers, to return to work soon after childbirth. In this respect, countries can provide resources for different types of households: on the one hand, they can actively support households with a clear distinction between

one partner acting as earner and the other being responsible for care activities by extended leave entitlements, generous (non means-tested) benefits and a tax system that treats one-earner families favourably; on the other hand, households where parents share paid and care work can also benefit from other policy developments. To measure the support received by these two types of households, we can examine how the provision of child-care services for children below age three, the existence of a leave period for fathers and tax incentives to encourage two earners instead of one are combined. The forms of support given to one or the other type of household are not mutually exclusive and can both exist in one country. However, policies may favour one type of household more than another, which may limit the extent to which households are actually free to choose their preferred organisation.

Two indexes built upon the aforementioned information on policy packages were designed to determine the degree of balance between the forms of support given to households with 'one earner parent and one carer parent' and households where both parents are 'earners and carers'. The index comparing the support received by households with a traditional division of work combines the information on the financial transfers received by families with two children presented in Fig. 2.4, the length of the period of (paid or unpaid) leave a women can take after a childbirth, the spending on leave per childbirth as reported in Fig. 2.9 and the relative marginal tax rate of a second earner.[5] The position of countries regarding these three variables is estimated by a standardised score which is then combined into a composite index.[6] A value close to 1 indicates stronger support of households with a clear divide between a parent who is the main earner and one who is the main carer. By contrast, a value of 0 does not mean that the country does not support this type of household, but that this support is lowest in countries with a 0 value.

A similar index is estimated to compare the types of support received by two-earner families. This index combines support in the form of tax incentives for two earners instead of one,[7] the duration of father-specific leave, if any, the coverage of services for children under age three and the spending per child allocated for the provision of these services as reported in Fig. 2.10. A value closer to 1 indicates stronger support for two-earner families with children.

[5] More precisely, the relative tax rate of the second earner is indicated by the ratio of the marginal tax rate on the second earner to the tax wedge for a single-earner couple with two children and average earnings. This ratio represents the share of the earnings of the second earner which goes into paying additional household taxes.

[6] The standardised score for each criterion x is given by the formula (1- [Max (x) – x]/[Max (x) – Min (x)]^2), which permits ranking countries by their score ranging from 0 to 1. The composite index is calculated by taking the weighted average of the score obtained for each dimension that counts for one quarter in the total index. It allows for a partial compensation between the different dimensions, which implies that a low score in one dimension can only be partially offset by a high score in another dimension.

[7] These incentives are estimated by the increase in the household's disposable income for a couple with two children where husband and wife both earn an income (100 % and 33 % of average earnings, respectively) as compared with the situation, in which the entire household income is earned by the husband.

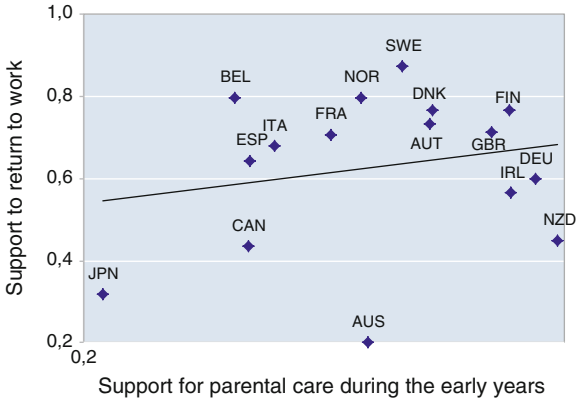

Fig. 2.13 Comparative support for work and/or care

Figure 2.13 plots countries with regard to these two indexes, which are only available for the few countries on which we have a complete set of information. Interestingly, many countries are located in the north-east of the figure that depicts the situation where both types of households receive quite high levels of support. This shows that countries which give stronger support to two-earner families also have quite high levels of support for households with one non-working parent who provides child care. Sweden and the other Nordic countries offer the highest levels of support for two-earner families. This is mainly due to the income return of having two instead of one earner and the broad provision of child-care services for children below age three. However, these countries as well as the United Kingdom also offer a comparatively high level of support for one-earner families, especially when compared with Belgium, France, Italy or Spain.

Among the countries considered here, support for either type of family is lowest in Japan. Australia, Germany, Ireland and New Zealand are the only countries where the one-earner/one-carer model explicitly receives more support. This is illustrated by their position below the diagonal line. Australia stands out as the country with the lowest support for families with two earners, but where part-time work for mothers is quite frequent despite the comparatively low level of policy support. In this case, maternal working time is a key adjustment variable, but is not taken into account here. It should be noted that even if support is weak, the one-earner/one-carer model is likely to be frequent in countries where the two-earner/two-carer model also receives low support, e.g., in Spain and Italy. This household type might often be 'chosen' as a default option when there is no support to help both parents to combine work and child-care.

2.3 Summary: Family Policies and Fertility Outcomes

In most OECD countries, support for families with children has been considerably extended over the past three decades. Parents now get more help to reconcile work and child care, but there are still large differences in the actual support received by

working parents with a child under three. To some extent, these differences reflect variations between two basic options in the early years after childbirth. On the one hand, policies can support a rather long interruption of labour market participation by one parent – in practice most often the mother – who makes use of extended leave entitlements to care for the young infant. This is often motivated by beliefs about the positive influence on child outcomes, although there is little evidence to suggest a lasting conflict between maternal employment and child outcomes (OECD 2011). In any case, mothers are expected to adjust their labour market participation and working hours to give priority to child care (Thévenon 2006). On the other hand, households with two earners sharing child care can be actively supported by policies that facilitate the mother's return to work soon after childbirth, as is the case, for example, in Nordic countries. Key factors to encourage this return are a limited but well-paid period of leave after childbirth combined with widely available child-care services for very young children. A more active contribution of fathers to care activities can also be fostered with father-specific leave entitlements after childbirth. Fathers usually take more leave days than in the past, but there is no clear evidence as yet that this significantly affects the division of unpaid work between men and women, which still remains gender unbalanced (OECD 2011; Miranda 2011). This 'combination' option assumes that young adults prefer to find a job and secure their earnings and labour market status before having children and using work-related support (Bernhardt 1993). One consequence of this attitude is that childbirth is postponed to later ages. This postponement process is a major cause of the decline in period fertility rates observed in most economically advanced countries over the past decades (Goldstein et al. 2009). However, supporting mothers' return to work seems to be an effective way to enhance fertility in the long run since countries which have high female employment rates now also have higher fertility rates (OECD 2011). As mentioned before, these two policy orientations do not necessarily exclude each other and many countries have developed support in both directions.

Figure 2.13 shows the parallel evolution of the average public expenditures given to families per child in OECD countries, on the one hand, and fertility rates, on the other hand. A steep fertility decline can be observed in Japan, Korea, German-speaking and southern European countries, which all continue to exhibit low fertility. By contrast, a significant rebound in fertility rates has occurred in continental and northern Europe and in English-speaking countries. The public expenditures given to families per child have increased at the same time. An acceleration of this rise started a bit earlier than the recovery in fertility rates in certain areas, which suggests that the development of family policies has played a role in the fertility upturn (Fig. 2.14).

Luci-Greulich and Thévenon (2013) provide evidence that the increase in government spending actually helped to boost fertility over the past decades. In line with former cross-national studies (see Table 2.1 for a summary of these results) they also find that each of the policy instruments contributes to raising fertility. However, the duration of paid leave as well as leave and birth grants paid after childbirth have a very small effect as compared to other cash benefits paid over childhood, and

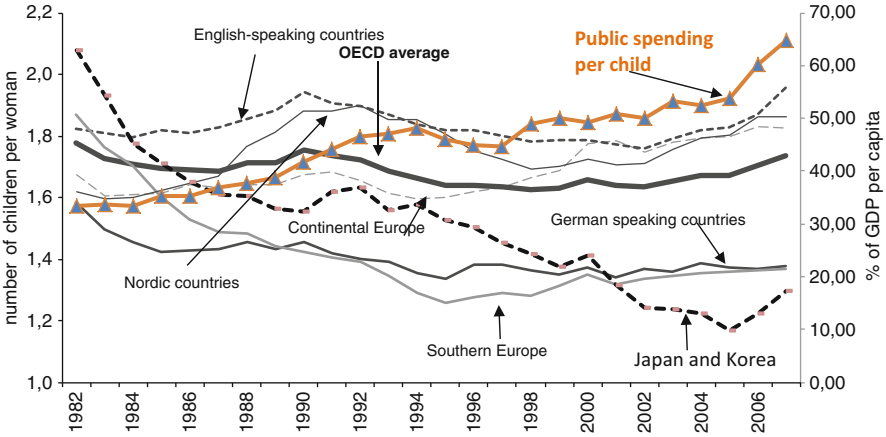

Fig. 2.14 Trends in fertility and per-child public spending on families, total fertility rates (*left axis*) and average government spending for families (*right axis*). Geographical areas are defined as: Anglophone (Australia, Canada, New Zealand, United Kingdom, United States); Nordic (Denmark, Finland, Norway, Sweden); Continental (Belgium, France, Netherlands); German-speaking (Austria, Germany); southern Europe (Greece, Italy, Spain). Government spending per child includes expenditures on family benefits, child-care services, leave and other payments made around childbirth. The average is calculated for 18 countries for which data are available, including Denmark, the Netherlands, Spain, Norway, Sweden, Portugal, France, New Zealand, Belgium, United States, Italy, Japan, Australia, United Kingdom, Ireland, Finland, Germany, Austria. (More details about the estimation of the indices can be received from the author)

especially as compared to the impact of child-care provision for children under age three. The increased supply of child-care services for preschool children, which helps parents to combine work and family life, seems to be a more efficient way of supporting fertility decisions in the long run than providing short-term support in the form of long leave periods and birth grants.

Although the extent to which families are given a choice between work and care in the early years after childbirth varies considerably across countries, it does not seem to strongly influence fertility trends in the long run. Paid parental leave and birth grants do have an impact on fertility rates, but their strongest effect is probably on the timing of births. Their impact is generally weak as compared to the provision of child-care services that facilitate a return to work after childbirth (Luci-Greulich and Thévenon 2013). The actual influence of family policies on fertility decisions might depend on the comprehensiveness of policy support.

Complementary combinations of support in time, cash and services to foster the work-life balance and continuity of this support over childhood are key parameters for policy effectiveness. In this respect, it is worth noting that despite rather high total spending for families, investments in child-care services are much lower in low fertility countries such as Germany, Austria or Hungary than in Nordic countries, France or the United Kingdom. The lack of child-care services hampers the combination of work and family formation and obliges parents, and especially women, to choose between having a child and pursuing a career.

Table 2.1 Comparison of results of cross-national studies

Study	Explained variable	Financial transfer	Leave entitlements			Childcare provisions		Country and period covered – methodology
			Duration	*Payment rate of maternity leave*	*Spending per child (all leaves including)*	*Spending per child*	*Enrolment rates*	
Gauthier and Hatzius (1997)	TFRs (for women with 1, 2 or 3 and more children separately)	Positive	Positive but statistically insignificant	Negative but statistically insignificant	–	–		22 OECD countries 1970–1990–panel data methods
Adsera (2004)	TFRs	–	Positive	–	–	–		28 OECD countries 1960–1997–panel data methods
D'Addio and Mira d'Ercole (2005)	TFRs	Positive	Negative	Positive	–	–		16 OECD countries 1980–1999–panel data methods
Hilgeman and Butts (2009)	Achieved fertility at age 18-45	–	Negative	Not significant	–	–	Positive	20 OECD countries 1995–2000 waves of European or World value Surveys–cross-sectional multilevel approach
Kalwij (2010)	Timing of birth	Not effect	Not included	–	Positive	No effect	Not included	16 European countries–event history analysis Information on individual fertility history from European Social Survey 2004
	Completed family size	Not effect			No significant effect	Positive		
Luci-Greulich and Thévenon (2014)	TFR	Positive	Positive	–	Positive	Not significant	Positive	OECD countries 1982–2007–panel data methods
	Tempo-adjusted fertility rates	Positive	Not significant	–	Not significant (negative)	Negative	Not significant (positive)	

The continuity of support over childhood is also fundamental for enabling potential parents to make clear childbearing plans. Fertility plans will be facilitated, in the first place, if there is no gap between the expiry of leave entitlements and the provision of child-care services. Continuity also implies that support does not stop when children enter compulsory school and that parents with school-aged children can find out-of-school-hours care services that match their working hours. Overall, a continuum in the support granted to working parents might help to minimise the lasting impact of childbearing on women's career opportunities that might prevent potential parents from having children. Reliable financial assistance throughout childhood seems also positively related with fertility trends (Luci-Greulich and Thévenon 2013). This finding is consistent with the fact that the cost of raising a child increases as the child grows older and that the compensation of this cost is crucial for reducing the poverty risk, but also for helping households fulfil their intentions to have children.

As already noted, countries also differ in the extent to which financial support targets households with specific needs caused by their limited income or size. Portugal and Italy are the two countries in which the largest share of family benefits (above two thirds) are means-tested, but a large number of benefits are also means-tested in many other countries, among them France, Germany, Ireland, Poland and Slovenia. Low-income families are also a specific target for policy support in many English-speaking countries, where the poorest quartile of families receives a substantial share of income assistance (Thévenon 2011). Transfers also vary with family size, especially in Belgium, France and Sweden where they are significantly higher for large families, i.e., those with three or more children.

Finally, the stability of policies over time is also vital for enabling potential parents to make fertility plans and to realise their fertility intentions. Although this chapter did not directly assess stability, it shows that lasting differences in policy contexts emerged decades ago and have remained quite large despite growing investment in families on the part of national governments. In France, for example, policy support for families is anchored in a longstanding tradition that explains the relative stability in completed fertility rates over and above changes in the timing of childbirths (Thévenon 2010). This historical background has created high expectations regarding policies but also strong confidence in the assistance that all families will receive from childbirth to adulthood. Moreover, the strong support received by working parents in France also explains why the birth of a first child has a comparatively weak impact on women's propensity to work full-time, while the impact of a second or third child is stronger (Thévenon 2009). By contrast, giving birth to a first child has a much stronger effect in Germany, the Netherlands and in eastern and southern European countries where overall support for working parents is weaker. Moreover, these countries have seen a rather strong increase in childlessness and an increase in the differentiation of mothers' labour market status by number of children over the past decades. In Germany and the Netherlands, for example, childless women were more likely to work full-time around 2005 than 15 years before, while mothers now tend to work more part-time and often short hours. This illustrates the particular role of part-time work in balancing work and family responsibilities in

countries where child-care provision is comparatively limited and where services cover few hours per day. Thus, other factors besides family policies, such as specific labour market contexts and attitudes towards the role of women and the state should also be considered as important factors for fertility. These two aspects might influence the extent to which policy-related resources are perceived and used by households and how they subsequently affect fertility behaviour.

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Chapter 3
Making the Decision to Have a Child

Jane E. Klobas and Icek Ajzen

3.1 Introduction

This chapter considers the role of various factors that influence a person's decision to have a child in different contexts. It focuses specifically on reasoned decisions to have or not to have a child (or, to be more precise, to *try* to have or to *try* not to have a child). Following the practice in demography, we call this decision the *intention to have a child* (Morgan 1985; Westoff and Ryder 1977). Generally speaking, a decision involves a choice between alternative courses of action. Consistent with this conceptualization, people make a decision when they form an intention to have or not to have a child.

At the outset, it is useful to reflect on what we mean by reasoning to have a child. To say that a decision is *reasoned* is not to say that the decision is *rational* (Fishbein and Ajzen 2010). Examples of flawed and non-rational reasoning abound in human decision making, and people are no different when they make decisions about having a child: the man who mistakenly believes that his parents would love to have a grandchild, not realizing that they feel too young to be grandparents; the woman whose wishful thinking leads her to believe that she can manage both child and career, not taking into account the arrangements that need to be put into place to make this happen or the obstacles that might prevent it.

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We use the theory of planned behavior[1] (TPB) as the framework for our analysis of influences on fertility decision making. We begin by extending the overview of the TPB provided in Chap. 1 to show how beliefs underpin attitudes (ATT), subjective norms (SN) and perceived behavioural control (PBC), and explain how all these factors are likely to differ in different contexts. We then present the study data from eight countries that participated in Wave 1 of the Gender and Generations Survey (GGS). The findings firstly summarize the possible effects of different individual backgrounds and contexts on intention to have a child in the short term (within 3 years), and on the antecedent beliefs available in the GGS. We then report on how the effects of ATT, SN and PBC on intention to have a child within 3 years vary across the countries in our sample, and finally consider how personal contextual factors might interact with country-level effects (national context) to explain the decision to have a child. We conclude that country, sex, the number of children a person already has (parity), and in some cases, age, and potentially partnership status, all play a part in setting the context for making the decision to have a child, but context alone provides a poor explanation of how the decision is made. Instead, the decision to have a child reflects beliefs about the outcomes of having a child, personal normative influences, and personal sense of control over the factors associated with having a child, the effects of which vary as individuals goes through their life course.

3.2 A TPB Model of the Decision to Have a Child

In this section, we restrict our use of the TPB to the antecedents of intention, and extend the discussion of the TPB to include beliefs. In Fig. 3.1, we present a simple TPB model of the intention to have a child, focusing on the three immediate

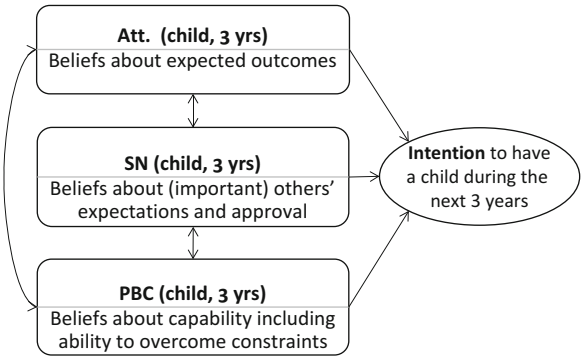

Fig. 3.1 The immediate antecedents of the intention to have a child during the next 3 years, as suggested by the theory of planned behavior, and their relationship with intention to have a child during the next 3 years

[1] In common with other chapters in this book, we use the original US spelling, *behavior*, in the name of the TPB model and the English spelling, *behaviour*, elsewhere.

antecedents of the decision. The outcome we are interested in (not shown in the figure) is "Having a child during the next 3 years"[2,3] This outcome defines the details of all the other elements of the model, which need to be expressed in "compatible" terms (Fishbein and Ajzen 2010). Intention is therefore expressed in Fig. 3.1 as the "Intention to have a child during the next 3 years".

We can obtain detailed information about the formation of ATT, SN, and PBC by inquiring into the beliefs that underlie these determinants of intentions. Specifically, ATT are assumed to be a function of beliefs about the likely consequences of having a child (behavioural beliefs); perceived social pressure or SN is assumed to arise from the perceived expectations of specific important social referent individuals or groups (normative beliefs), and PBC is assumed to derive from beliefs about the presence or absence of factors that can facilitate or interfere with having and caring for a child (control beliefs).

The following are examples of the three different kinds of beliefs.

- Behavioural beliefs underlying attitudes: Having a child in the next 3 years will cut into my free time; having a child in the next 3 years will improve my relationship with my partner.
- Normative beliefs underlying subjective norms: My partner thinks we should have a child in the next 3 years; my close friends think I should not have a child in the next 3 years.
- Control beliefs underlying perceived behavioural control: I am in good enough physical health to have a child in the next 3 years; our community does not have adequate child care services to support me if I have a child in the next 3 years.

3.2.1 Childbearing Decisions in Context

The context in which a decision is made is an important principle in the TPB. A different context defines a different intention – and therefore, potentially, a different set of determinants (Fishbein and Ajzen 2010). The decision to have one's first child is also the decision to become a parent, a significant change in the life course, and typically quite different from the decision of an existing parent to have another child (Philipov et al. 2006). The decision to have one's first child (to become a parent) is likely to have a different set of considerations to the decision to have one's second or subsequent child because the decision maker (a 'childless' person in the first instance, or a parent in the second) is making the decision in a very different personal context. Similarly, it is not difficult to imagine that the beliefs about having

[2] For simplicity, we use "Having a child" to refer here to subsequent children as well as the first child, but we distinguish between first and subsequent children in the results.

[3] Three years defines the outcome to be within a foreseeable period of time, one about which we might expect people's reasoning about having a child to be more realistic than it would be for an indefinite future.

a child that are important for women in their late teens differ from those that are important for women in their late twenties, and again in their late thirties, or that the antecedents that are important to a person without a partner differ from those that are important to a person who has been married to the same partner for several years.

So, not only are childbearing decisions made in wider environmental contexts, as illustrated in Fig. 1.3, they are also made in different personal contexts. In the TPB, these variables can be treated as background factors, as shown in Fig. 1.3. If this is the case, different TPB models will provide good explanations of the decision to have a child in different contexts. TPB models can differ in several ways: the beliefs underlying one or more of ATT, SN or PBC might differ; different beliefs might have greater or lesser prominence in different contexts; the relative importance of ATT, SN, and PBC as predictors of intentions might differ; or any combination of these differences might be observed.

In this chapter, we examine the extent to which differences in parity, partnership status and age, along with country of residence affect beliefs and influence the importance of ATT, SN and PBC as determinants of intention to have a child.

3.3 Data

We use data from eight countries that participated in Wave 1 of the Generations and Gender Survey (GGS: Vikat et al. 2007): Bulgaria (BG, dated collected in 2004), Russia (RU, 2004), Georgia (GE, 2006), Germany (DE, 2005), France (FR, 2005), Hungary (HU, 2004–2005), Italy (IT, 2003)[4] and Romania (RO, 2005). Participants are limited to females aged between 18 and 49, males aged 18 or over (except for those in a partnership with a female partner aged under 50), who are not currently pregnant (or whose partner is not currently pregnant), and who did not declare that they are unable to have a child. After removing respondents who did not provide information about their intention to have a child, the sample consisted of 48,886 respondents, but many respondents who indicated they did not want to have a child answered very few, if any, of the questions about beliefs. After removing respondents with more than 20 % of missing items appropriate to their life circumstances (partnership status and whether or not parents were living), the sample was reduced to 38,813. Characteristics of this sample and their intentions are summarized in Table 3.1.

[4] Harmonized GGS data were not available for Italy at the time of our study, but the subset of data necessary for these analyses were provided by Istat and harmonized to the GGS by UNECE. The Italian dataset provides data for more than one member of each household. We selected one respondent at random from each Italian household.

Table 3.1 Intention to have a child during the next 3 years and the characteristics of the sample, countries ordered by percentage of analysis sample respondents who definitely intend to have a child (increasing)

	All	BG	RU	DE	RO	GE	FR	IT	HU
All R with intentions	48,886	4,720	5,705	4,084	5,887	5,321	5,041	9,834	4,720
% Definitely yes	10.3	6.5	7.6	8.4	8.3	11.4	13.1	8.6	24.0
Analysis sample									
Sample size	38,813	7,339	4,881	3,732	5,522	5,197	4,340	3,162	4,640
Intention									
Definitely yes	11.6	6.6	6.8	7.7	8.5	11.6	14.1	18.8	24.4
Undecided[a]	33.3	36.2	37.0	23.3	28.3	40.2	24.6	70.4	14.1
Definitely no	55.1	57.3	56.3	69.0	63.1	48.2	61.2	10.8	61.6
Sex									
Male	49.8	47.4	50.4	44.8	58.7	51.8	47.6	46.9	47.9
Female	50.2	52.6	49.6	55.2	41.3	48.2	52.4	53.1	52.1
Parity									
0 (childless)	29.9	31.8	21.1	33.8	30.5	38.1	35.6	27.5	19.7
1 child	26.3	26.5	37.8	25.4	30.0	14.8	16.7	37.0	24.8
2 or more children	43.8	41.7	41.1	40.8	39.6	47.1	47.7	35.5	55.5
Partnership status									
Single	23.8	30.0	23.0	23.2	24.9	39.2	24.5	0.0	11.9
Non-cohabiting partner	5.5	4.2	11.2	10.0	4.4	1.4	10.4	0.0	2.7
Cohabiting partner	12.0	9.8	11.4	12.3	5.3	12.4	20.5	8.1	18.0
Married	58.8	55.9	54.4	54.4	65.4	47.1	44.5	91.9	67.4
Age									
18 to 24	15.8	20.2	18.5	16.2	14.7	24.1	17.0	2.4	6.3
25 to 34	34.5	36.4	33.4	27.3	32.8	31.5	31.6	40.0	42.2
35 to 44	37.8	35.4	35.0	41.8	38.3	32.0	37.9	48.0	39.9
45 and over[b]	11.9	8.0	13.0	14.8	14.2	12.5	13.5	9.6	11.7
Education									
No secondary	5.3	5.4	0.3	1.1	2.9	1.0	0.5	40.7	1.4
Secondary	55.8	74.1	38.3	62.5	80.2	48.7	30.7	46.9	47.0
Tertiary	38.9	20.5	61.4	36.4	16.9	50.3	68.8	12.4	51.6

[a]Collapsed GGS response categories *probably yes* and *probably no*

[b]Includes females under 50 and all males over 44 except those with a female partner younger than 50 (We do not have information about the age of non-cohabiting partners, but we used a matching procedure to estimate the probability that a man had a female partner aged 50 or more. More detail is available in Klobas (2010))

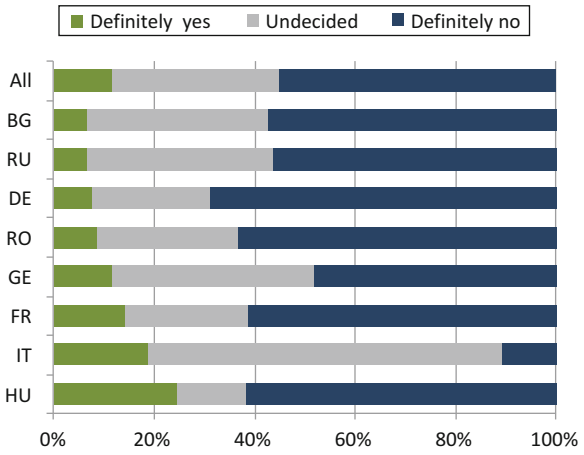

Fig. 3.2 Intention to have a child during the next 3 years in eight different countries, GGS Wave 1, ordered by definite intention to have a child (i.e., *definitely yes*)

The resulting sample is clearly not representative in all countries.[5] Notably, no single or non-cohabiting respondents from Italy are included, resulting in an older sample on average, and a higher intention to have a child (18.8 %) relative to the Italian GGS sample as a whole (10.3 %). The German sample has a low proportion of male respondents, while the Romanian sample has a high proportion of female respondents. France and Russia have a high proportion of tertiary educated respondents. Only in Italy is the analysis sample associated with a substantially different intention to have another child in the next 3 years, however, and again with the exception of Italy, the ranking of countries in order of intention to have a child remains much the same in the analysis sample as among all respondents who expressed an intention. The differences in intention to have a child across the different countries in the analysis sample are illustrated in Fig. 3.2.

In addition to illustrating how intention to definitely have and to definitely not have a child in the next 3 years varies across the different countries, Fig. 3.2 draws attention to the high proportion of Italian respondents, and the relatively high proportion of Georgian respondents, who are undecided. There is no obvious geopolitical or cultural pattern in intentions viewed at the country level. We therefore turn to potential contextual and social psychological explanations.

[5] Although population weights are available for some GGS countries, they are not available for all countries. A test on the whole sample of the weights for those countries for which weights are available showed that there remained some discrepancies between population and sample proportions after weighting (see, e.g., notes on Methodology and Processing for France at http://www.ggp-i.org/online-data-analysis.html), so it was decided to work with unweighted samples.

3.4 Findings

We articulate our findings in five sections. In Sect. 3.4.1, we use variance components analysis to identify if certain individual differences might act as contexts associated with differences in intentions to have a child. This analysis also sets a baseline for the ability of country, and each of the personal context variables, to explain intention. In Sect. 3.4.2, we identify beliefs available from the GGS that are salient (relevant) to the decision to have a child, and examine how beliefs vary with individual difference. Structural equation modeling (SEM) is then used (Sect. 3.4.3) to show similarities and differences in beliefs and in the effects of ATT, SN and PBC on intention for the sample as a whole and in different countries. ATT, SN and PBC provide much stronger explanations of intention to have a child in the next 3 years than country or individual difference. In Sect. 3.4.4, we show how the introduction of individual differences as proxies for personal context provides a better fit to the data than national context (country) alone, and finally, in Sect. 3.4.5, we provide some illustrations of the many variations in the importance of beliefs, and the contribution of ATT, SN and PBC to the decision to have a child for people in different personal contexts (notably, females of different parity) in different countries.

3.4.1 The Contexts in Which the Decision to Have a Child Varies

To identify contexts associated with differences in beliefs about and intentions to have a child, we use the SPSS Variance Components procedure to estimate the variance in intention that is explained by each individual difference variable after taking account of country level differences. Reduced maximum likelihood (REML) estimates of the interaction between country (random factor) and the sources of individual differences (each entered in a separate model as a fixed factor) are shown in Table 3.2. Estimates of factor contributions are the simple difference between variance explained by the country and are therefore indicative only.

Both parity and age explain more variance in intention than country, and the introduction of these factors reduces the unexplained variance considerably. All interaction effects of individual differences with country are low. On the other hand, we can expect some interaction between parity, partnership status and age: older participants are more likely than younger participants to have had at least one child, if not two or more; similarly, we can expect partnership status to be related to age and parity. When we take the interactions between these variables into account, parity remains the most important contextual variable (Table 3.3).

Table 3.2 Variance in intention to have a child within 3 years attributable to country, interaction of each source of individual difference with country, and estimate of separate contribution of each source of variance

	Variance component			
Source of variance (factor)	Unexplained (error) variance	Country	Interaction with country	Estimate of factor contribution
Country	0.449	0.046	–	0.046
Parity	0.353	0.043	0.021	0.072
Age	0.374	0.041	0.011	0.062
Partnership status	0.433	0.044	0.008	0.011
Education	0.446	0.045	0.003	0.001
Sex	0.448	0.046	0.001	0.001

Note. Restricted maximum likelihood (REML) estimates

Table 3.3 Variance in intention to have a child within 3 years attributable to parity, partnership status and age and the interaction between them (only variance proportions above .01 are reported), $n = 34{,}046$[a], error variance = .306, country level variance = .009

Source of variance	Variance	Proportion
Parity	0.109	0.22
Age	0.023	0.05
Partnership status	0.015	0.03
Age by parity	0.011	0.02
Age by parity by partnership status	0.026	0.05

Note. Restricted maximum likelihood (REML) estimates, weighted samples
[a]Italy is excluded from the sample because there is little variation in partnership status

3.4.2 Beliefs About Having a Child in the Next Three Years

In this section, we identify which of the beliefs available from the GGS are likely to be salient to the decision to have a child in the contexts studied. These beliefs define ATT, SN and PBC for our subsequent analysis of the different ways in which people in different contexts make the decision to have a child.

In the standard form of GGS Wave 1, 11 questions are asked about the expected outcomes of having a child in the next 3 years, six of them about possible positive outcomes and five about possible negative outcomes; three questions are asked about normative beliefs; and nine questions about control beliefs. The control questions do not directly ask if the respondent perceives they have control over each control factor, but only how much their decision depends on the factor. Thus, we do not know if respondents who say their decision depends on a factor (e.g., financial situation) perceive that they have enough control (e.g., they can afford to have a child) or not. This limits our ability to identify effects of PBC. The responses, for the whole sample, are summarized in Table 3.4.

Table 3.4 Beliefs about having a child in the next 3 years, respondents to GGS Wave 1 in eight countries, % in each category, all countries combined

Attitudes		*n*	Much better	Better	Neither	Worse	Much worse
	Positive outcomes						
	Joy and satisfaction	38,023	11.6	37.3	39.7	8.7	2.8
	Care and security in old age[a]	33,962	6.6	40.3	47.9	3.4	1.8
	Certainty in your life[b]	33,434	7.7	35.0	49.9	5.4	2.0
	Closeness with partner[c]	33,841	8.1	31.0	53.5	5.6	1.8
	Closeness with parents	35,029	4.8	22.2	68.0	3.4	1.6
	What other people think of you	36,883	2.5	19.3	68.7	6.7	2.8
	Negative outcomes						
	Financial situation	38,431	0.4	3.2	30.5	49.0	16.9
	Female's job opportunities	34,884	0.6	3.6	35.3	42.5	18.1
	Possibility to do what you want	38,261	1.0	5.6	37.1	42.0	14.3
	Male's job opportunities	34,755	1.0	5.6	73.1	15.4	5.0
	Sexual life	37,088	1.7	9.6	76.4	9.7	2.6
Subjective norms			Strongly agree	Agree	Neither	Disagree	Strongly disagree
	Parents want you to have a child	33,814	10.1	17.8	17.8	18.9	35.5
	Friends want you to …	35,896	7.4	15.5	21.8	19.6	35.8
	Relatives want you to …[a]	33,061	6.2	13.9	20.2	20.3	39.4
Perceived control	Decision depends on …		Not at all	A little	Quite a lot	A great deal	
	Financial situation	37,281	28.4	19.5	26.3	25.8	
	Suitable partner[a]	32,366	48.7	9.0	17.1	25.2	
	Female's work	33,947	38.3	21.1	23.8	16.9	
	Child-care	36,902	38.7	20.9	23.4	16.9	
	Housing conditions	37,280	40.2	20.6	21.3	18.0	
	Male's work	34,543	43.9	18.9	21.3	15.9	
	Female's health[d]	34,595	43.7	20.0	20.0	16.4	
	Parental leave[a]	31,465	53.2	17.6	16.5	12.7	
	Male's health[d]	34,083	53.0	18.0	16.2	12.8	

[a]Not available for Italy
[b]Not available for Hungary
[c]We use "partner" whether the respondent is married or not. The distinction is made in the GGS
[d]Not available for partner in Italy

The most widely expected positive outcomes of having a child in the next 3 years are increased joy and satisfaction from life, improved care and security in old age, increased certainty in life, and increased closeness with partner. Because questions about partners were asked only of respondents with a partner, increased closeness with partner is omitted from further analysis. The most widely expected negative outcomes are a worse financial situation, poor female job opportunities, and reduced "possibility to do what you want". Few respondents believe that having a child will have a positive or negative effect on the other aspects of life assessed in the GGS. These aspects will not be considered further in this chapter.

Table 3.4 also shows a wide range of normative beliefs. Nonetheless, more than half of the respondents believe that their parents, relatives, and friends all disagree or strongly disagree that they should have a child.

Financial situation is the most important control factor, while male health and parental leave are the least important. The other control factors are of similarly moderate importance. We will consider only the five most important control factors in Sect. 3.4.3.

3.4.3 Differences in Beliefs

In this section, we compare beliefs by country and source of individual difference. The countries are ordered by respondents' intention to have a child in the next 3 years. Analysis of variance (ANOVA) with Tukey's post-hoc analysis is used to compare mean beliefs. Differences on this basis ($p < .05$) are pointed out in the text, and the full set of comparisons is available from the first author. The figures show the proportions of respondents in each category for each belief.

3.4.3.1 Differences in Beliefs by Country

We begin by comparing differences in beliefs across the eight countries in our sample. Figure 3.3 summarizes positive expectations about the outcome of having a child. German respondents are least positive about having a child, while Georgian respondents are most positive. The extent to which respondents in different countries expected different positive outcomes also varies. For example, in France, which has strong family policies (Thévenon and Luci 2010), having a child is not expected to have much effect on care and security in old age. In Georgia, where there were concerns about economic and political security at the time of the survey (BMI 2008), having a child is expected to contribute to care and security in old age much more than in the other countries.

Beliefs about the negative outcomes of having a child are compared in Fig. 3.4. Respondents in all countries expect to be worse off if they have a child, with

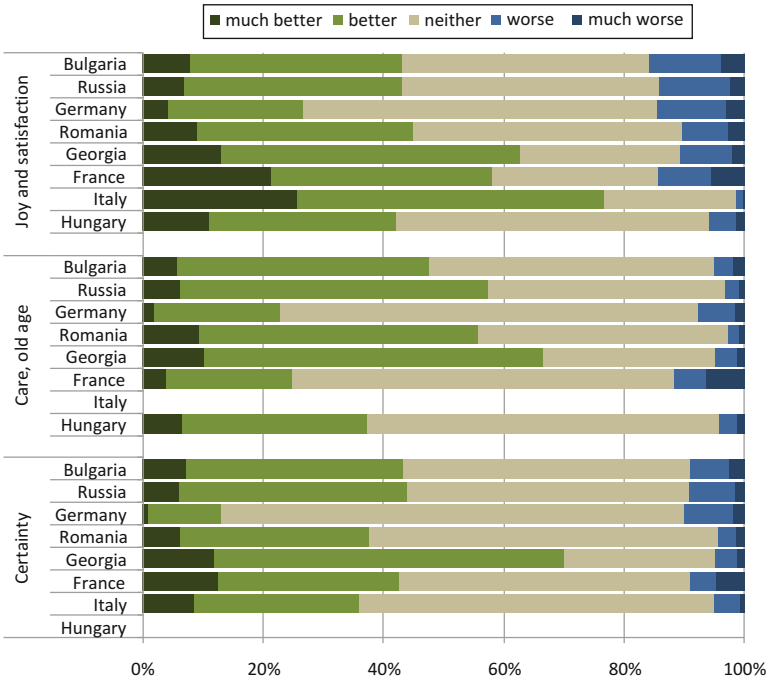

Fig. 3.3 Expected positive outcomes of having a child in the next 3 years, by country ordered from lowest to highest intention to have a child

respondents in Bulgaria – the country with the lowest intention to have a child – expecting to be worse off than those in other countries on all outcomes, and those in Georgia and Italy expecting to be less worse off than those in other countries on all negative outcomes. Of interest are the relatively large groups of respondents (more than 10 %) in Georgia and France who expect that having a child will improve the female partner's job opportunities.

There is more variation in normative beliefs for having a child (Fig. 3.5) than in the expected outcomes of having a child. Leaving aside Italy, for which the sample consisted primarily of married people, there is stronger perceived social pressure in all countries (albeit somewhat less in Georgia and Romania) to not have a child than to have a child.

Perceived control, in terms of dependency on control factors, varies factor by factor and country by country (Fig. 3.6). The only clear patterns are that perceived dependency on all control factors is highest in France, the country in the sample with the most complete and stable institutional context for families (Thévenon and Luci 2010), and lowest in Romania, among the countries with the lowest intentions in the sample.

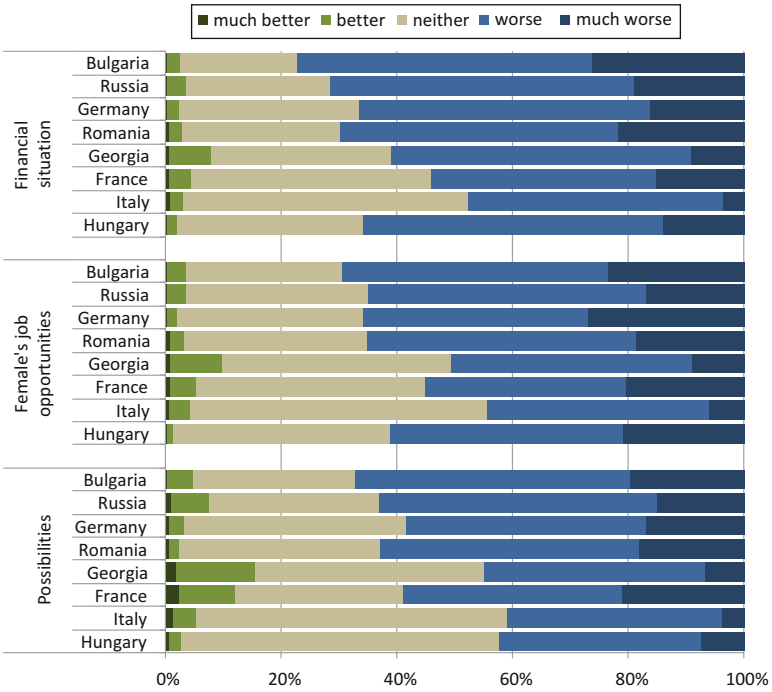

Fig. 3.4 Expected negative outcomes of having a child in the next 3 years, by country ordered from lowest to highest intention to have a child

3.4.3.2 Differences in Beliefs by Parity

Expected positive outcomes decline, while expected negative outcomes increase, with the number of children a person already has (Fig. 3.7). In terms of negative outcomes, it is interesting to note that the belief that having a child will restrict the possibility to do "what I want" is held about equally by respondents with no children or with one child. Figure 3.8 confirms that the more children they have, the more respondents are likely to believe that others do not want them to have another child. This effect is particularly marked among people who already have two or more children. Perceived dependence on control factors increases with parity (Fig. 3.9).

3.4.3.3 Differences in Beliefs by Age Group

Expectations of positive outcomes decline quite dramatically with age, while expectations of negative outcomes change less (Fig. 3.10, top panel). Fewer respondents aged 25 to 34 (although still 60 %) expect negative outcomes than older respondents. While the belief that others disagree that the respondent should have a child in the next 3 years generally increases with age, there is markedly lower perceived

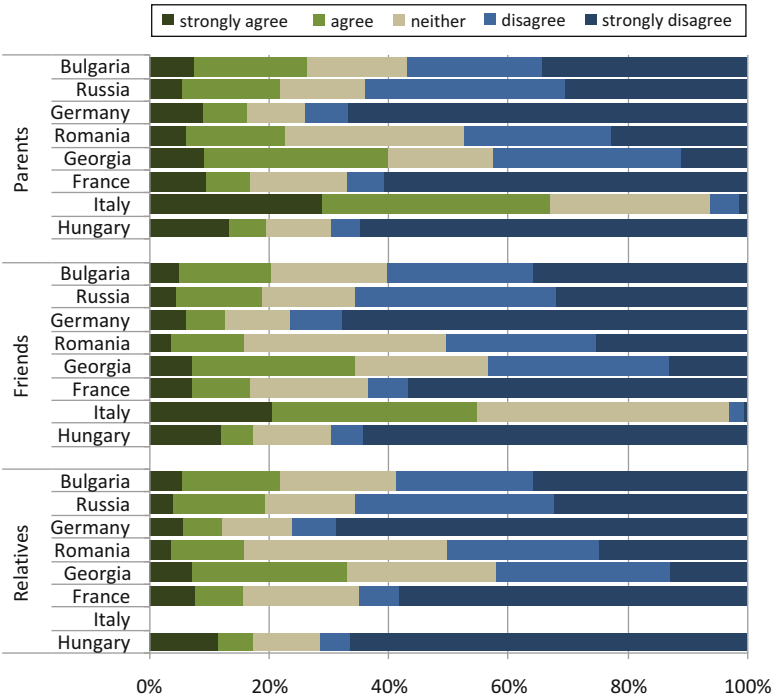

Fig. 3.5 Normative beliefs about having a child in the next 3 years, by country

disagreement (and higher perceived agreement) among 25 to 34 year olds (Fig. 3.10, bottom panel). Perceived dependency on control factors increases steadily with age (Fig. 3.11).

3.4.3.4 Differences in Beliefs by Partnership Status

As relationships form and become more stable, fewer respondents report that they believe having a child in the next 3 years will bring positive outcomes (Fig. 3.11). There is greater variation in expected negative outcomes, with stronger belief among respondents with non-cohabiting partners that having a child will reduce their possibilities to do what they want and affect their work (women) or their female partner's work (men) (Fig. 3.12).

Cohabiting, but not married respondents, report the strongest normative pressure to have a child, while married respondents report the strongest normative pressure not to have a child (Fig. 3.13). Control in the sense of having a suitable partner is less of an issue for cohabiting and married respondents than others (Fig. 3.14). Indeed, overall and with only minor variation, perceived dependence on control factors increases with relationship stability.

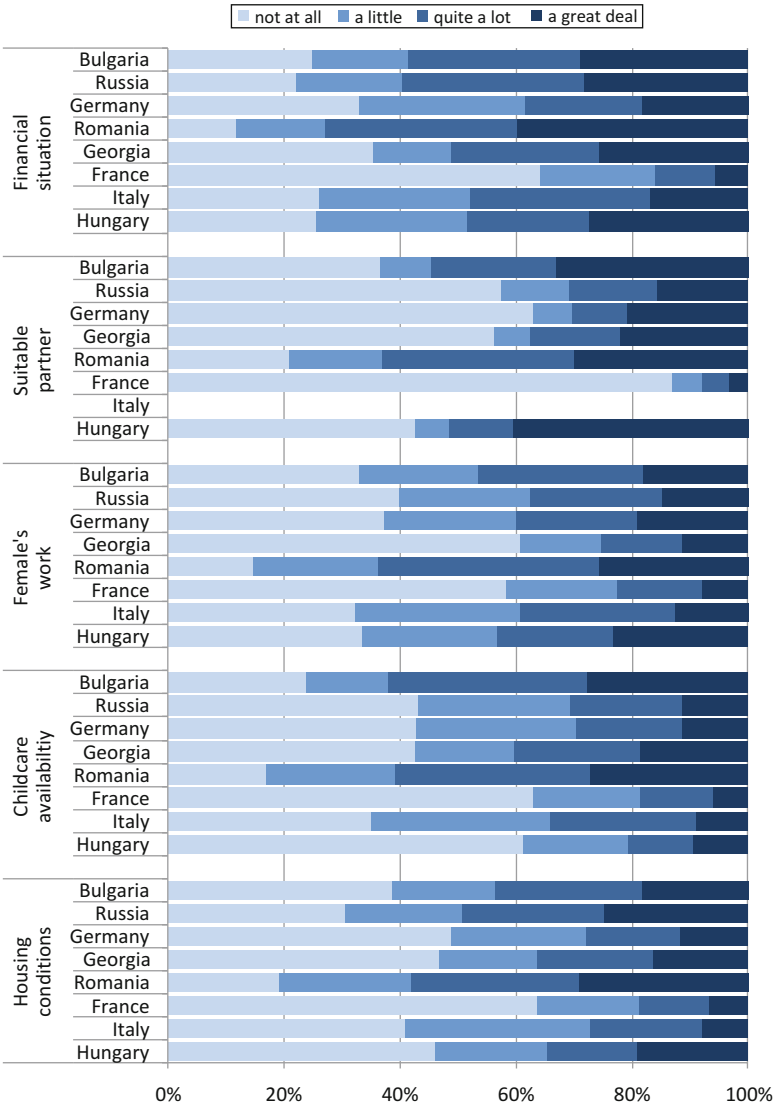

Fig. 3.6 Perceived importance of control factors for having a child in the next 3 years, by country, ordered from lowest to highest intention to have a child

3.4.3.5 Differences in Beliefs by Education

Expected outcomes differ by level of education (Fig. 3.15, top panel). The expectation that having a child in the next 3 years will bring certainty in life increases with educational level. Each of the negative outcomes is expected most strongly among respondents with secondary education, an indication that these respondents might

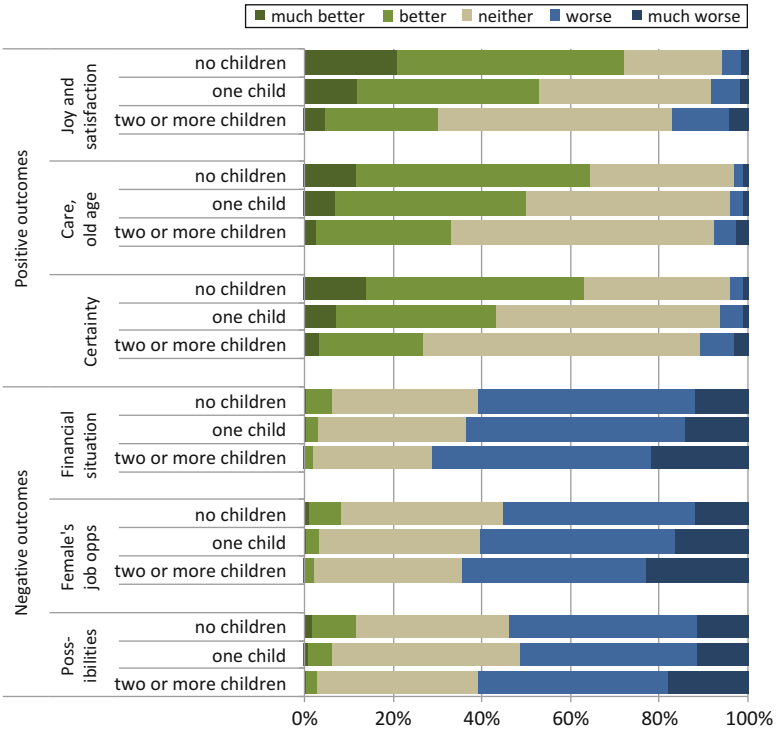

Fig. 3.7 Expected outcomes of having a child in the next 3 years, by parity

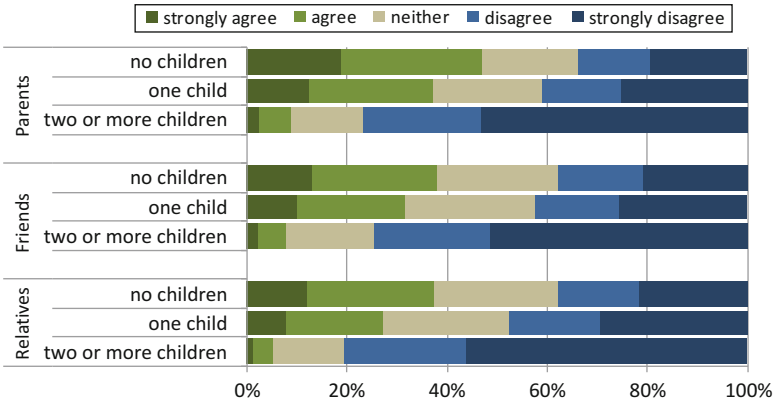

Fig. 3.8 Normative beliefs about having a child in the next 3 years, by parity

be more affected than those with higher educational levels who may have more alternatives in all spheres of life, including work arrangements. Perceived control (Fig. 3.16) seems to confirm that this might be the case: control factors are of least concern to the most highly educated respondents, and, overall, decrease in

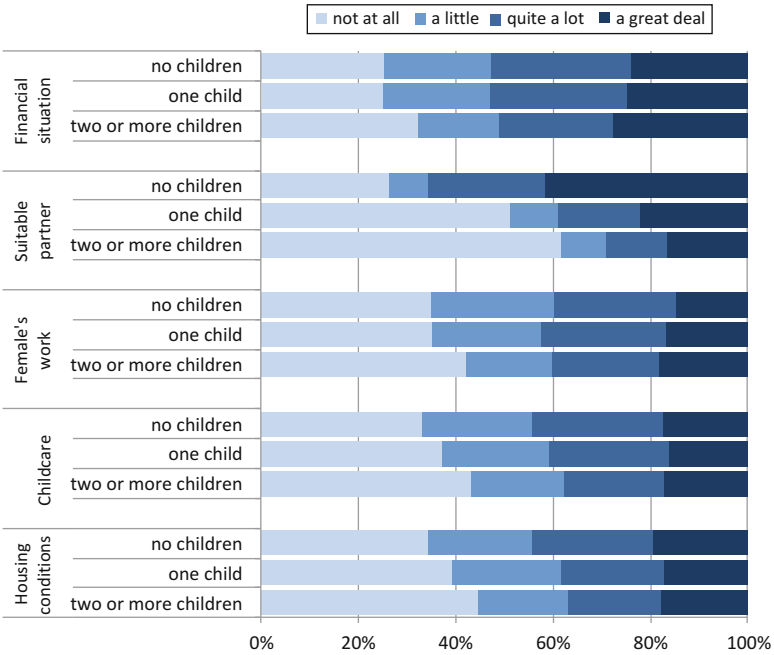

Fig. 3.9 Perceived importance of control factors for having a child in the next 3 years, by parity

importance as level of education increases. The respondents with the lowest level of education feel stronger normative pressure from parents and friends to have a child than do respondents at other levels of education. There is little difference, however, in perceived normative pressure from other relatives (Fig. 3.15, bottom panel).

3.4.3.6 Overview of Differences in Beliefs

Our results suggest that national and personal context contribute to our understanding of beliefs as the antecedents of intention. Just as we saw for intention, beliefs vary with country of residence, parity, partnership status, and age, but less so with education.

Our earlier exploration of possible contextual differences in intentions showed some correlations between parity, partnership status and age; parity accounted for the greatest effect. We use parity in this section as a proxy for personal context in an initial examination of how national and personal context might interact. Tables 3.5, 3.6, 3.7 and 3.8 present a set of analyses of variance (ANOVA) in which the dependent variables are the mean behavioural beliefs, mean normative beliefs, and mean control beliefs, respectively. The mean beliefs are compared by parity for each country. The effects of parity and country are significant at $p<.05$ in almost all cases, confirming that beliefs vary by both personal and national context.

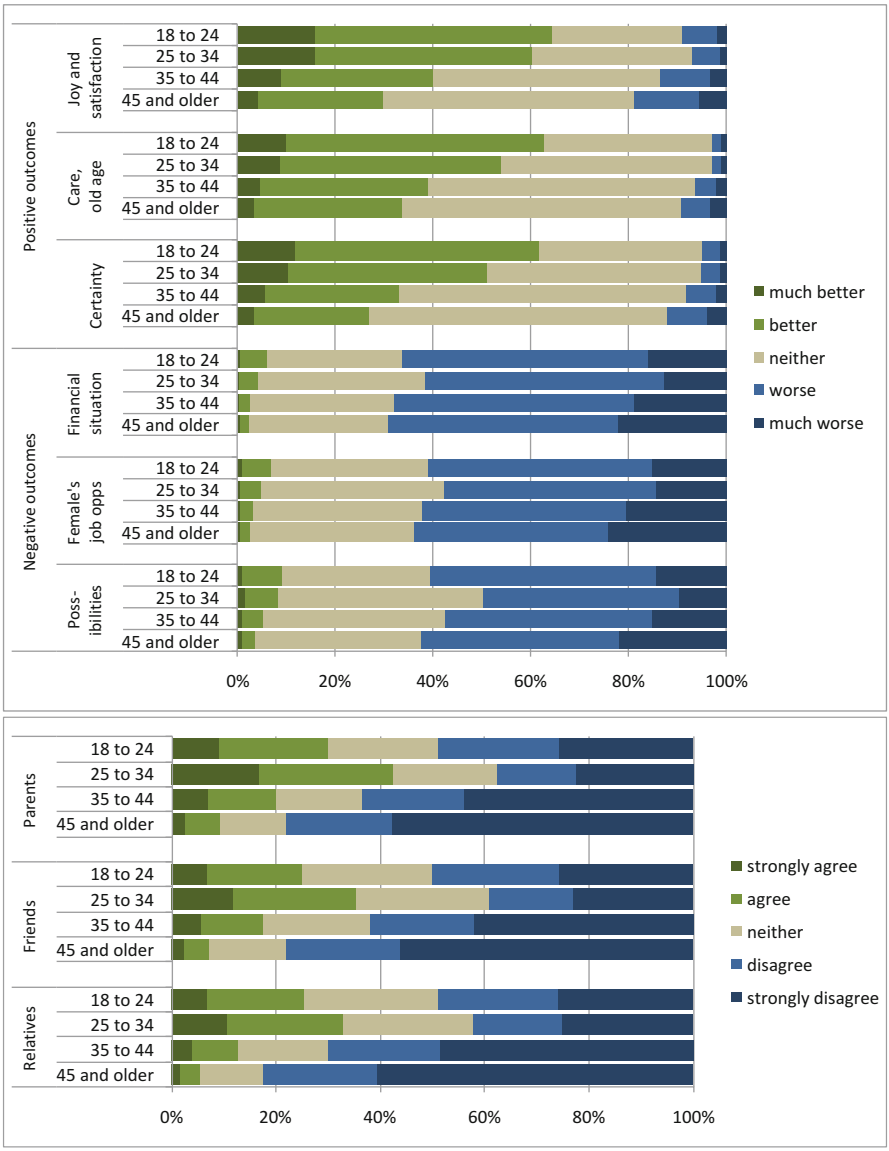

Fig. 3.10 Expected outcomes (*top panel*) and normative beliefs (*bottom panel*) of having a child in the next 3 years, by age group

Table 3.5 shows that expectations of positive outcomes decline with the number of children a person has in all countries. The effect size column shows that the effect of parity differs in strength from belief to belief and country to country. In Germany, the effect of differences in parity is low to very low for all positive outcome beliefs, e.g., $\eta^2 = .02$ for care and security in old age. In Bulgaria (.14), Georgia (.15), and

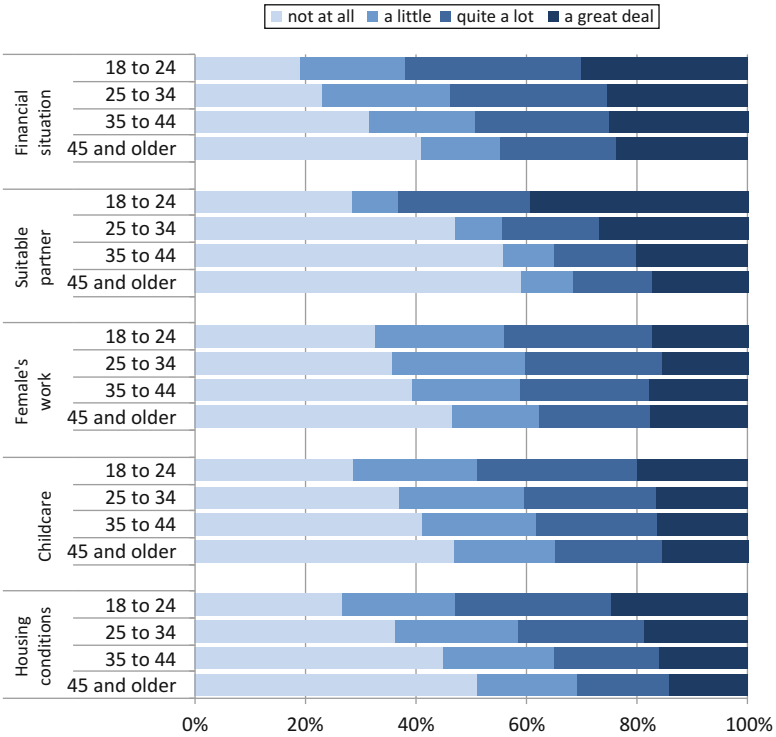

Fig. 3.11 Perceived importance of control factors for having a child in the next 3 years, by age group

France (.15), the effect of parity on care and security in old age is stronger, even though the belief that having one's first child (parity 0) would increase care and security in old age was weak in France (M = 2.70) compared to the former Eastern bloc countries (Bulgaria = 2.26, Georgia = 2.00).

Differences in beliefs about the negative outcomes of having a child vary only a little by parity (Table 3.6). The largest differences are seen between parity 1 and parity 2+. In Bulgaria and Georgia – and to a lesser extent (lower eta-square) in Russia and Romania – there is a small but significant increase with parity in beliefs that having a child will have negative outcomes for financial situation and female employment opportunity. With the exception of Bulgaria and Georgia, a different pattern is observed for the belief that having a child will limit the possibility to "do what you want". The strongest parity effect is seen in France where, like most countries, there is little difference between the decision to have the first and second child, but a notable difference between the second and third or subsequent child.

Perceived social approval of having a child declines with parity in all countries except Georgia and France (Table 3.7). In Georgia, where beliefs that friends, parents and other relatives agree that the respondent should have another child are relatively strong to begin with, there is no difference between parity 0 and parity 1, but there is a sharp increase when it comes to having a third or subsequent child

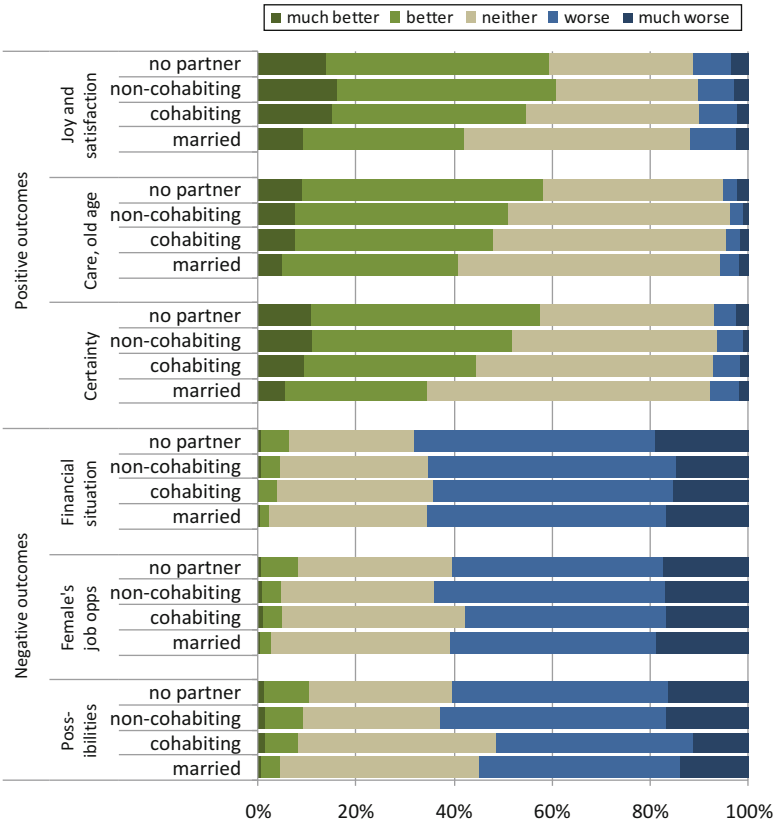

Fig. 3.12 Expected outcomes of having a child in the next 3 years, by partnership status

(parity 2+). In France, it appears that, in terms of perceived friends' opinion, having two children (the decision taken at parity 1) is more strongly supported than having just one (the decision at parity 0). The effect size column shows that differences in parity have a moderate to moderately strong effect on normative beliefs in all countries. The strongest effects are seen for beliefs about parents' and other relatives' opinions in Bulgaria (the lowest fertility intention country in the sample) and Hungary (the highest fertility intention country).

Parity makes little difference to the importance of control factors in the different countries (effect size < .05 for all control factors in all countries, Table 3.8) and, overall, there is little commonality in the relationships between parity and control by country. Only in Germany do we see a consistent pattern, that of decreasing importance of control factors with increasing parity. In France, financial situation declines in perceived importance with increasing parity. On the other hand, the perceived importance of all control factors, except child-care, increases with parity in Italy. In Georgia, the only significant difference is an increase in the perceived importance of financial situation between parity 0 and parity 1.

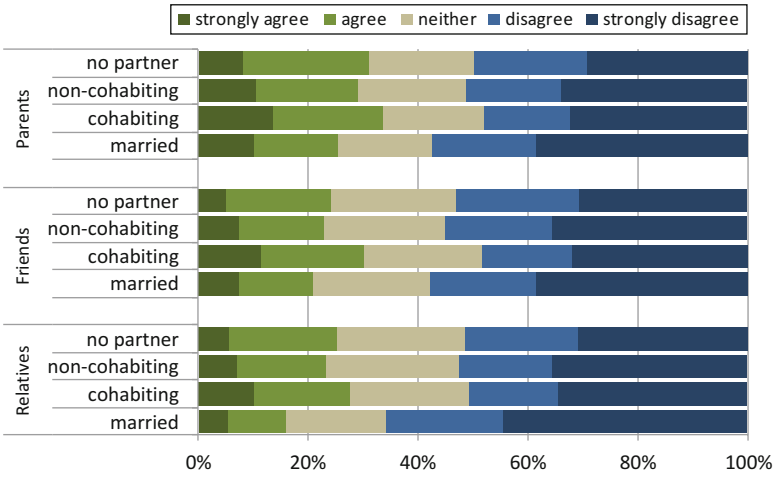

Fig. 3.13 Normative beliefs about having a child in the next 3 years, by partnership status

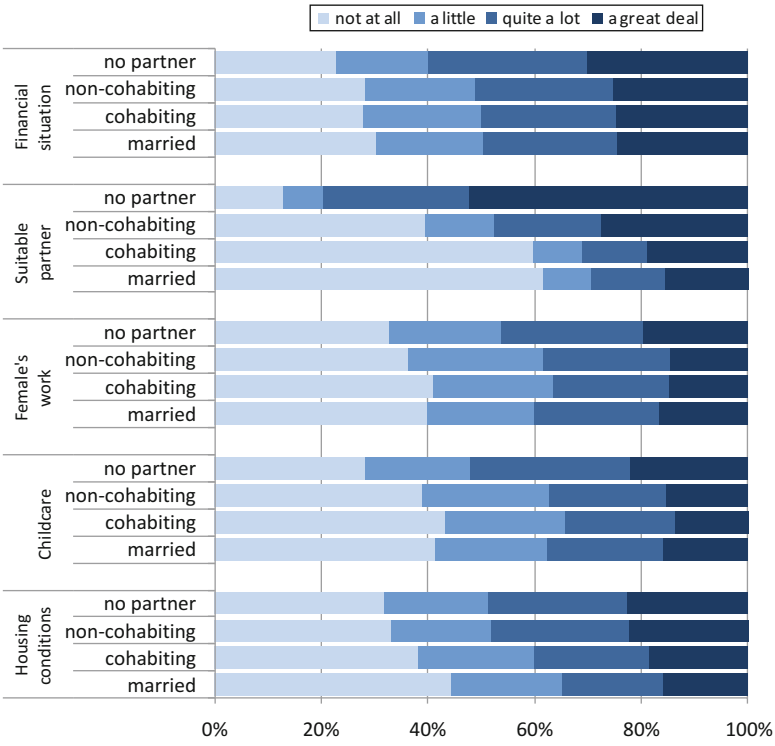

Fig. 3.14 Perceived importance of control factors for having a child in the next 3 years, by partnership status

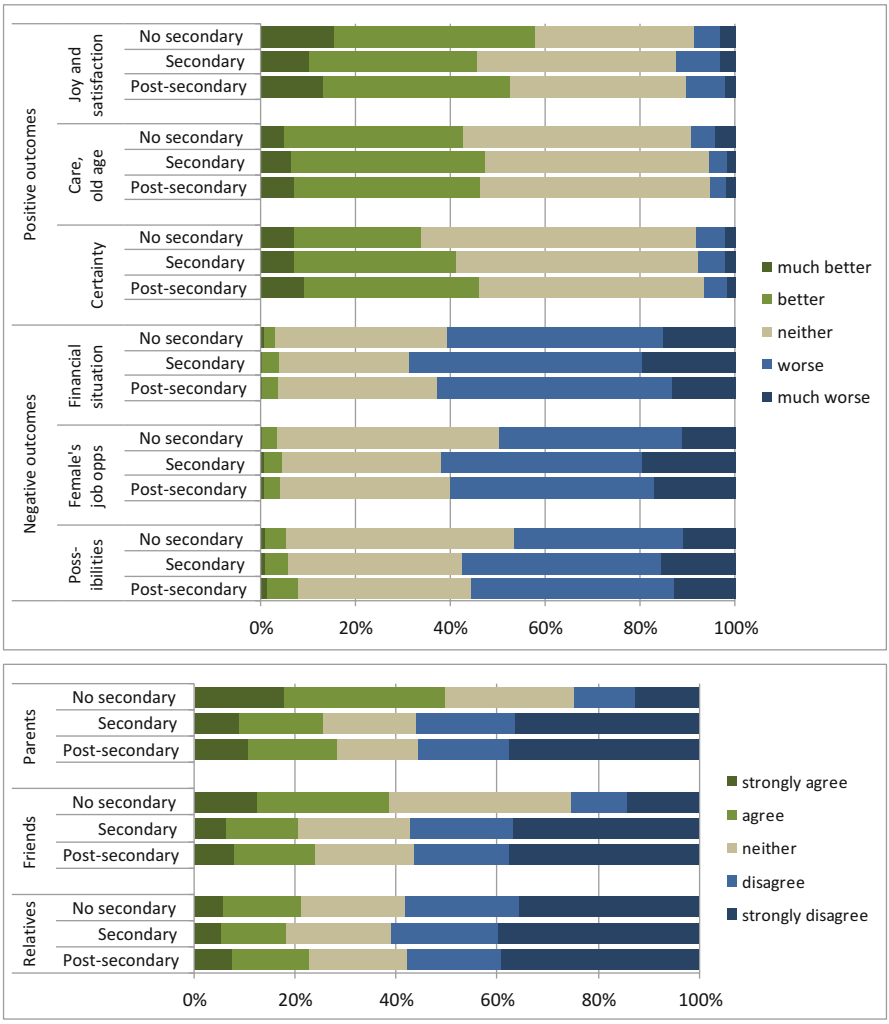

Fig. 3.15 Expected outcomes (*top panel*) and normative beliefs (*bottom panel*) of having a child in the next 3 years, by level of education

3.4.4 Effects of Social Psychological Factors on Childbearing Decision Making in Different Countries

In this section, we compare the extent to which the different beliefs in each country reflect ATT, SN and PBC as well as how each of these factors influences the decision to have a child. Although all expected outcomes are aggregated to measure ATT in the TPB, we retain the distinction between positive (Att-Pos) and negative

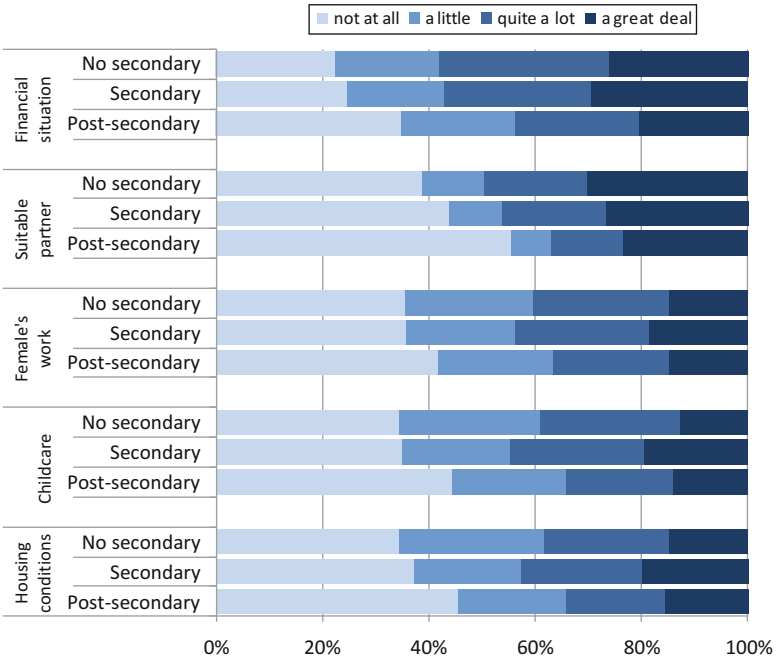

Fig. 3.16 Perceived importance of control factors for having a child in the next 3 years, by level of education

outcomes (Att-Neg) here in order to retain the information about the effects of both sets of expectation, following Billari et al. (2009) and Dommermuth et al. (2011).

We use multi-group structural equation modeling (SEM), as implemented in AMOS, to generate measurement models and structural models. Groups are defined by country.

The common measurement model for Att-Pos, Att-Neg and SN appears in Fig. 3.17. The tabs represent the multiple groups defined by country. To allow for potential differences in the beliefs that underlie these latent variables in each country, we use a reflective model in which each latent variable is assumed to exist and to reflect an underlying subset of beliefs, including those measured in the GGS. The measurement model for PBC is an index developed from the control factors available for each country and individual who reported their dependency on at least two of the five most important control factors. When plotted, the mean scores on the control beliefs form a power law distribution. The latent variable is therefore constructed as the outcome of two variables: one binary variable measured as 1 – no dependency on control or 0 – some dependency on control, and the log of the mean dependency score. As seen earlier, not all beliefs are available for all countries. Where a belief is excluded from a country's GGS, it is omitted from the measurement model, but the latent variable is still included in the structural model of effects on intention for that country.

Table 3.5 Differences in beliefs about positive outcomes of having a child in the next 3 years, by country and parity

Country	Childless (parity 0)		One child (parity 1)		Parity 2+		Effect size (η^2)	Contrasts
	M	SD	M	SD	M	SD		
Joy and satisfaction								
Bulgaria	2.21	.82	2.60	.84	3.11	.84	.18	0<1<2+
Russia	2.24	.81	2.58	.81	2.97	.82	.11	0<1<2+
Germany	2.66	.89	2.86	.75	3.04	.66	.04	0<1<2+
Romania	2.20	.84	2.51	.79	2.93	.77	.13	0<1<2+
Georgia	1.97	.75	2.29	.84	2.72	.87	.15	0<1<2+
France	2.05	.93	2.16	1.02	2.79	1.08	.11	(0<1) **<2+
Italy	1.82	.72	1.95	.71	2.17	.73	.04	0<1<2+
Hungary	1.92	.71	2.39	.81	2.84	.66	.21	0<1<2+
Care and security in old age								
Bulgaria	2.26	.69	2.49	.68	2.78	.73	.14	0<1<2+
Russia	2.18	.64	2.36	.66	2.57	.69	.10	0<1<2+
Germany	2.66	.68	2.88	.61	2.97	.53	.02	0<1<2+
Romania	2.15	.70	2.35	.68	2.58	.69	.08	0<1<2+
Georgia	2.00	.62	2.21	.71	2.56	.74	.15	0<1<2+
France	2.70	.80	2.85	.78	3.07	.78	.15	0<1<2+
Italy	n.a.							
Hungary	2.16	.72	2.53	.73	2.81	.59	.12	0<1<2+
Certainty in life								
Bulgaria	2.23	.75	2.56	.77	2.95	.75	.09	0<1<2+
Russia	2.22	.72	2.55	.75	2.85	.74	.05	0<1<2+
Germany	2.89	.63	2.98	.54	3.05	.48	.05	0<1<2+
Romania	2.35	.74	2.59	.68	2.82	.63	.07	0<1<2+
Georgia	1.94	.61	2.15	.71	2.51	.77	.12	0<1<2+
France	2.19	.86	2.50	.91	2.96	.83	.04	0<1<2+
Italy	2.39	.77	2.60	.71	2.79	.66	.13	0<1<2+
Hungary	n.a.							

Note. Within country univariate analysis of variance with a priori tests of differences between parities (0 and 1) and (1 and 2+). All contrasts significant with $p<.001$ unless bracketed
n.a. data not available for this country
*$p<.01$; **$p<.05$. Scores from 1 *much better* to 5 *much worse*

The structural model is shown in Fig. 3.18. The four latent variables, Att-Pos, Att-Neg, SN and PBC are modeled as having a direct effect on intention. Consistent with the TPB, they are permitted to be correlated. Age is used as a proxy for personal context in initial modeling and modeled as an actual control directly factor affecting PBC, and measured as 0 for age under 35, else age/100.

In Table 3.9, we report the results of joint maximum likelihood estimation of the measurement and structural models. More detail is available in Klobas (2010). The first thing to notice is the high proportion of variance in intention to have a child

Table 3.6 Differences in beliefs about negative outcomes of having a child in the next 3 years, by country and parity

Country	Childless (parity 0)		One child (parity 1)		Parity 2+		Effect size (η^2)	Contrasts
	M	SD	M	SD	M	SD		
Financial situation								
Bulgaria	3.79	.76	3.91	.74	4.21	.71	.06	0<1<2+
Russia	3.64	.76	3.82	.72	4.00	.74	.03	0<1<2+
Germany	3.86	.76	3.83	.75	3.75	.72	.004	(0=1)<2+**
Romania	3.66	.80	3.77	.77	4.02	.75	.04	0<1<2+
Georgia	3.38	.85	3.59	.70	3.79	.68	.06	0<1<2+
France	3.53	.76	3.44	.72	3.67	.80	.01	(0<1)*<2+
Italy	3.44	.60	3.45	.65	3.57	.64	.01	(0=1)<2+**
Hungary	3.69	.65	3.72	.68	3.84	.72	.01	(0=1)<2+**
Female's employment opportunities								
Bulgaria	3.69	.83	3.85	.78	4.09	.77	.04	0<1<2+
Russia	3.56	.80	3.78	.74	3.88	.76	.03	0<1<2+
Germany	3.94	.79	4.00	.83	3.88	.86	.003	(0=1)<2+**
Romania	3.63	.82	3.78	.75	3.93	.77	.02	0<1<2+
Georgia	3.30	.87	3.51	.77	3.62	.73	.03	0<1<2+
France	3.47	.84	3.48	.86	3.78	.85	.03	(0=1)<2+
Italy	3.40	.69	3.44	.68	3.54	.71	.01	(0=1)<2+**
Hungary	3.63	.72	3.75	.77	3.89	.79	.02	(0=1)<2+**
Possibility to do what you want								
Bulgaria	3.62	.81	3.68	.79	4.02	.75	.05	0<(1<2+)*
Russia	3.56	.88	3.61	.82	3.82	.80	.02	(0=1)<2+
Germany	3.80	.83	3.72	.80	3.71	.77	.003	(0<1)*=2+
Romania	3.68	.79	3.66	.74	3.88	.75	.02	(0=1)<2+
Georgia	3.12	.94	3.24	.78	3.54	.76	.05	(0<1)**<2+
France	3.35	.97	3.38	.99	3.90	.89	.08	0<1<2+
Italy	3.37	.69	3.36	.67	3.48	.67	.01	0<1<2+
Hungary	3.45	.69	3.43	.68	3.51	.68	.003	(0=1=2+)

Note. Within country univariate analysis of variance with a priori tests of differences between parities (0 and 1) and (1 and 2+). All contrasts significant with $p<.001$ unless bracketed
*$p<.01$; **$p<.05$. Scores from 1 *much better* to 5 *much worse*

explained by this model, relative to the models that included only country and individual differences (Tables 3.2 and 3.3), ranging from .43 to .59 across all countries except Italy, where variance explained is reduced because the measurement model is poor. Social psychological factors explain the decision to have a child much better than national contextual differences alone or in combination with individual differences. This makes sense: the reasons for making a decision can only be inferred from background and context while attitudes, subjective norms, and perceived behavioural control provide more direct information about the factors that influence the decision to have a child.

Table 3.7 Differences in normative beliefs about having a child in the next 3 years, by country and parity

Country	Childless (parity 0)		One child (parity 1)		Parity 2+		Effect size (η^2)	Contrasts
	M	SD	M	SD	M	SD		
Parents								
Bulgaria	2.88	1.31	3.12	1.27	4.36	.87	.264	0<1<2+
Russia	3.11	1.28	3.40	1.21	4.21	.91	.145	0<1<2+
Germany	3.55	1.56	4.01	1.41	4.70	.82	.136	0<(1<2+)*
Romania	2.87	1.21	3.17	1.14	4.00	.89	.169	0<1<2+
Georgia	2.56	1.08	2.54	1.11	3.63	1.06	.201	(0=1)<2+
France	3.28	1.55	3.43	1.52	4.51	.97	.176	0<1<2+
Italy	1.59	.77	2.02	.80	2.67	.88	.218	0<1<2+
Hungary	2.57	1.57	3.62	1.57	4.73	.81	.335	0<1<2+
Friends								
Bulgaria	3.10	1.23	3.22	1.23	4.35	.87	.224	0<(1<2+)**
Russia	3.26	1.20	3.39	1.20	4.17	.92	.121	0<(1<2+)*
Germany	3.87	1.41	4.02	1.40	4.63	.87	.077	(0<1)*<2+
Romania	3.08	1.14	3.29	1.07	3.96	.87	.124	0<1<2+
Georgia	2.63	1.04	2.61	1.08	3.65	1.01	.195	(0=1)<2+
France	3.38	1.40	3.17	1.46	4.40	1.04	.169	0<1<2+
Italy	1.84	.79	2.25	.79	2.64	.73	.143	0<1<2+
Hungary	3.03	1.61	3.57	1.56	4.62	.93	.219	0<1<2+
Other relatives								
Bulgaria	3.04	1.27	3.26	1.23	4.39	.84	.241	0<1<2+
Russia	3.30	1.26	3.44	1.20	4.25	.88	.132	(0<1)**<2+
Germany	3.83	1.42	4.13	1.31	4.72	.74	.102	0<1<2+
Romania	3.13	1.17	3.35	1.08	4.00	.86	.121	0<1<2+
Georgia	2.65	1.03	2.69	1.11	3.69	1.01	.198	(0=1)<2+
France	3.32	1.46	3.38	1.48	4.46	1.00	.170	0<1<2+
Italy	n.a.							
Hungary	2.79	1.60	3.67	1.54	4.74	.77	.299	0<1<2+

Note. Within country univariate analysis of variance with a priori tests of differences between parities (0 and 1) and (1 and 2+). All contrasts significant with $p<.001$ unless bracketed
n.a. data not available for this country
*$p<.01$; **$p<.05$. Scores from 1 *strongly disagree* to 5 *strongly agree*

Looking at the values in italics in the *All R* column, we see that normative influences (SN) dominate the decision to have a child, when we consider all countries combined. The beliefs underlying these factors are mostly of a personal nature, and only some of them might be influenced – indirectly – by policy or institutional arrangements. Att-Pos and PBC have a similar effect, about 60 % of the strength of SN, and Att-Neg has about half the effect of these two variables. Overall, normative

Table 3.8 Differences in importance of control factors for having a child in the next 3 years, by country and parity

Country	Childless (parity 0)		One child (parity 1)		Parity 2+		Effect size (η^2)	Contrasts
	M	SD	M	SD	M	SD		
Financial situation								
Bulgaria	2.64	1.05	2.66	1.11	2.56	1.23	< .05	(0=1)<2+*
Russia	2.54	1.05	2.65	1.08	2.66	1.16	< .05	(0=1)<2+
Germany	2.48	1.08	2.13	1.08	2.06	1.08	< .05	0<1<2+
Romania	2.97	1.00	2.86	1.02	3.08	1.02	< .05	(0<1)**<2+
Georgia	2.36	1.20	2.54	1.15	2.42	1.23	< .05	(0<1)**=2+
France	1.88	.99	1.49	.79	1.47	.84	< .05	0<1<2+
Italy	2.20	1.04	2.40	1.04	2.50	1.04	< .05	0<1<2+
Hungary	2.33	1.06	2.46	1.11	2.51	1.17	< .05	(0<1)*<2+**
Female's work								
Bulgaria	2.33	1.01	2.34	1.09	2.28	1.19	< .05	(0=1=2+)
Russia	1.95	.99	2.14	1.09	2.18	1.14	< .05	0<1<2+
Germany	2.43	1.10	2.24	1.16	2.01	1.11	< .05	0<1<2+
Romania	2.73	.98	2.69	1.01	2.79	1.01	< .05	(0=1)<2+**
Georgia	1.81	1.06	1.74	1.04	1.73	1.08	< .05	0=1=2+
France	2.04	1.06	1.60	.88	1.62	.95	< .05	0<1<2+
Italy	2.11	1.01	2.20	1.04	2.25	1.03	< .05	(0<1)*<2+*
Hungary	2.04	1.02	2.31	1.15	2.44	1.20	< .05	0<1<2+
Child-care availability								
Bulgaria	2.78	1.02	2.59	1.11	2.56	1.19	< .05	0<1<2+
Russia	1.92	.96	1.95	1.00	2.01	1.07	< .05	(0=1)<2+*
Germany	2.23	1.05	1.94	1.04	1.81	.98	< .05	0<1<2+
Romania	2.82	.99	2.71	1.04	2.69	1.06	< .05	(0=1)<2+*
Georgia	2.15	1.14	2.21	1.14	2.16	1.20	< .05	(0=1=2+)
France	1.72	.92	1.60	.90	1.60	.94	< .05	(0<1)*=2+*
Italy	1.91	.93	2.15	.98	2.12	.98	< .05	(0<1)*<2+*
Hungary	1.63	.92	1.70	1.01	1.73	1.03	< .05	(0=1)<2+*
Housing conditions								
Bulgaria	2.40	1.10	2.16	1.13	2.14	1.18	< .05	0<1<2+
Russia	2.51	1.11	2.44	1.15	2.34	1.19	< .05	(0=1)<2+*
Germany	2.17	1.08	1.78	1.02	1.74	.99	< .05	0<1<2+
Romania	2.82	1.09	2.54	1.08	2.68	1.09	< .05	(0<1)=2+
Georgia	2.05	1.13	2.09	1.14	2.05	1.17	< .05	(0=1=2+)
France	1.92	1.02	1.56	.91	1.51	.88	< .05	(0<1)*=2+
Italy	1.80	.92	1.96	.96	2.02	.96	< .05	(0<1)*<2+*
Hungary	2.21	1.16	1.98	1.14	1.99	1.16	< .05	(0<1)<2+*

Note. Within country univariate analysis of variance with a priori tests of differences between parities (0 and 1) and (1 and 2+). All contrasts significant with $p<.001$ unless bracketed
*$p<.01$; **$p<.05$. Scores from 1 *not at all* to 4 *a great deal*

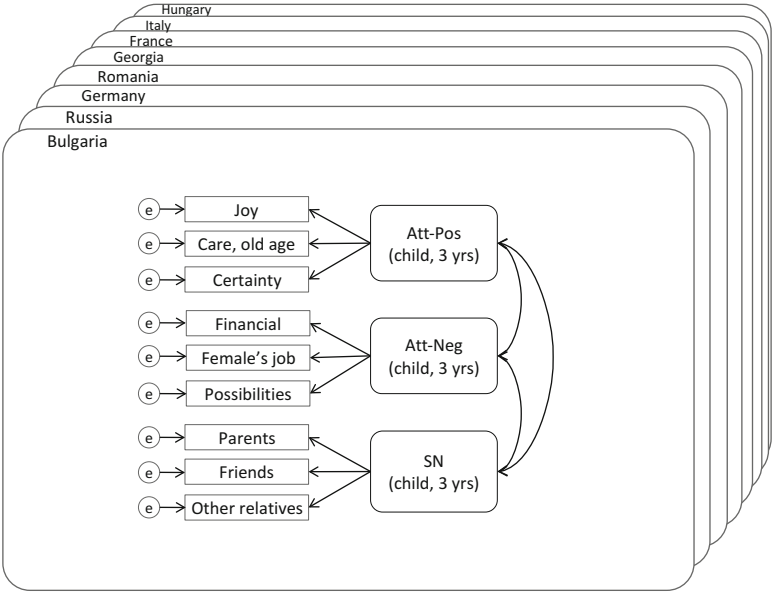

Fig. 3.17 SEM measurement model for Att-Pos, Att-Neg, SN and PBC. Each observed variable is explained by variance from the latent variable, with error represented by *e*

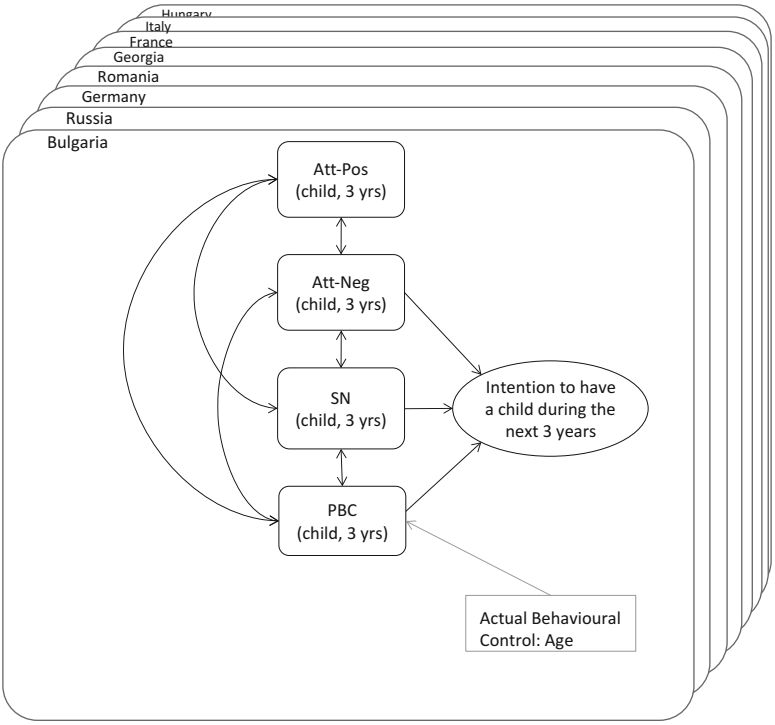

Fig. 3.18 SEM structural model for effect of Att-Pos, Att-Neg, SN and PBC on intention to have a child in the next 3 years. Age is modeled both as a background factor with effect on Att-Pos, Att-Neg, SN and PBC, and as a proxy for differences in personal context through a direct effect on Intention

Table 3.9 Measurement model for Att-Pos, Att-Neg and SN, and structural effects of Att-Pos, Att-Neg, SN, and PBC on intention (Not reported in the table are (a) the effect of *age* on PBC, which is significant at $p<.001$ in all countries and has a total effect on intention (through PBC) of about .2 in all countries; (b) correlations between the direct antecedents of intention: r(Att-Pos, Att-Neg) and r(Att-Pos, SN) approx. .5, $p<.001$, all countries; r(Att-Neg, SN) $p<.001$ all countries, approx. .45 except for Germany and Hungary, approx. .25; r(Att-Neg, PBC) varies from .14 (Bulgaria) to .35 (Germany) $p<.05$ in all countries; all r(Att-Pos, PBC) and r(SN, PBC) are non-significant), all R, and by country ordered by definite intention to have a child in the next 3 years

	All R	BU	RU	DE	RO	GE	FR	IT	HU
Sample size	35,914	6,814	4,617	3,502	5,414	5,180	2,936	2,986	4,445
Att-Positive Outcomes	*.23*	*.23*	*.24*	*.22*	*.18*	*.10*	*.28*	*.30*	*.51*
Certainty in life	.82	.89	.83	.66	.82	.92	.81	.62	na
Joy and satisfaction	.75	.79	.77	.68	.67	.71	.79	na	.86
Care, old age	.71	.73	.62	.61	.76	.89	.51	.68	.56
Att-Negative Outcomes	*.13*	*.14*	*.06*	*.06*	*.16*	*.14*	*.29*	*.07*	*.02 ns*
Limits possibilities	.73	.77	.78	.70	.68	.72	.60	.67	.71
Financial situation	.73	.80	.79	.66	.75	.82	.77	.53	.47
Woman's work opps	.65	.66	.65	.66	.64	.63	.62	.55	.61
Subjective Norm (SN)	*.41*	*.42*	*.41*	*.43*	*.43*	*.51*	*.28*	*.20*	*.27*
Relatives	.96	.98	.97	.95	.96	.97	.92	na	.96
Parents	.93	.96	.94	.88	.92	.95	.82	.85	.91
Friends	.89	.91	.87	.80	.91	.94	.84	.74	.83
Perc'd Beh'l Control (PBC)	*.26*	*.26*	*.24*	*.34*	*.33*	*.22*	*.26*	*.27*	*.26*
Explained variance in intention	.48	.50	.43	.46	.50	.46	.56	.29	.59

Note. Standardized coefficients to permit comparison of relative weights within country. Weights cannot reliably be compared across country. Weights in italics are structural weights (effects on intention). Weights not in italics are factor loadings, i.e., the measurement model for the factor. All weights are statistically significant at .05 or less except *ns* not significant, *na* not available

influences on the decision to have a child in Europe remain strong, while anticipated negative outcomes (including limitations on individual freedom) have a weak effect – quite the opposite effect to that predicted by the theory of the second demographic transition (Lesthaeghe 1995).

3.4.4.1 Differences in the Belief Structure of ATT, SN and PBC by National Context

Beliefs are ordered in Table 3.9 by their weight as reflectors of the latent TPB variables. In some countries, the weighted order differs, for some TPB variables, from the proportion of respondents who hold each belief. Thus, we cannot rely on the extent to which people in different contexts hold each belief to define Att-Pos, Att-Neg, SN, and PBC. Even if a belief is widely held (a descriptive measure), that does not mean it is highly influential in determining how a decision is made (an inferential measure). Indeed, it may be that widely held beliefs form a kind of underlying fabric that is taken for granted while other beliefs have greater influence on the decision to have a child.[6]

Furthermore, if the importance of beliefs differs in different countries, then the meaning of the latent TPB variables that reflect those beliefs also differs. For example, we can see in Table 3.9 that care and security in old age is of little importance relative to the other beliefs about positive outcomes in defining Att-Pos in France and Hungary. This suggests that, when people in France and Hungary think about the positive outcomes of having a child, they are thinking less about care and security in the long term and more about the joy and satisfaction that having a child will bring. This needs to be taken into account when interpreting the results.

Technically, we also see that only the measurement model for SN is satisfactory by the rules of thumb for SEM measurement models in all countries: each observed variable – belief in this case – should have a loading of .7 or above, with the average squared loading of all variables equal to .5 or above. At least one attitudinal belief has a loading below .7 in each country, and measurement models for both Att-Pos and Att-Neg are poor for Italy, Germany and Hungary. Identification of more salient behavioural beliefs about having a child is likely to lead to a better understanding of the decision to have a child in these countries.

3.4.4.2 Differences in the Effects of ATT, SN and PBC on Intentions by Country

The relative influence of the TPB factors on the decision to have a child in the next 3 years in the different countries in the sample is illustrated in Fig. 3.19. The radar chart clearly shows that SN dominates in the five lower intention countries (including Germany), but although still important, it is of increasingly lower relative importance in the higher intention countries (France, Italy and Hungary). PBC is of similar importance in all countries, but its importance is increasingly outweighed by that of Att-Pos as intention increases, and Att-Pos clearly dominates the decision to have a child in the next 3 years in Hungary. Att-Neg is of relatively low importance,

[6] Empirically, widely held beliefs have little variance and hence cannot contribute to the prediction of intentions.

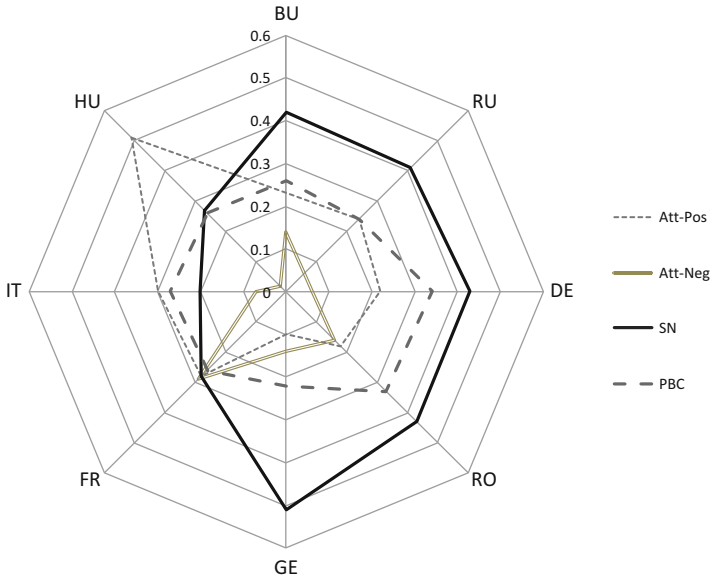

Fig. 3.19 Relative influence of attitudes to positive outcomes (*Att-Pos*), attitudes to negative outcomes (*Att-Neg*), subjective norms (*SN*) and perceived behavioural control (*PBC*) on intention to have a child in the next 3 years in eight European countries ordered from lowest intention (*BU*) to highest intention (HU). Each radial shows standardized coefficients for a country on a scale of 0 to .6. Lines are drawn between coefficients for each antecedent for each country

except in France, where all social psychological antecedents have a similar weight across the population as a whole.

Even taking differences in the make-up of the TPB factors in the different countries into account, it is not easy to interpret all the differences in effects at country level. In fact, in technical as well as theoretical terms, a model that takes only national context into account is not particularly satisfactory. SEM provides several indexes of the fit between the model and the observed data.[7] As Table 3.10 shows, multi-group modeling at the country level provides a better fit than pooling all responses together – but satisfactory fit is approached only once country, parity and sex are together taken into account. In other words, the factors associated with the decision to have a child vary across countries and, within countries, by sex and parity (lowest chi-square/df).

[7] The quality of the fit of a structural equation model is compared to rules of thumb for good fit. These vary, but most are summarized by Hair et al. (2006, p. 753). We use the rules of thumb for a model with between 12 and 30 observed variables (beliefs and intentions, and where appropriate, age and age squared) and more than 250 case observations. We also adopt the least conservative rule of thumb for chi-square/df = 4, given the large sample sizes in this research, but consider lower values of this ratio indicators of better fit.

Table 3.10 Fit of different multi-group structural equation models, compared to rules of thumb for good fit

			Fit index				
Model no.	Model		Chi-square	df	Chi-square/df	RMSEA	CFI
	Rule of thumb		Not significant		< 4	< .07	> .92
1	All R		12,528.63	68	184.24	.07	**.95**
2	Sex		13,253.48	136	97.45	**.05**	**.95**
3	Parity		10,288.09	204	50.43	**.04**	**.96**
4	Partnership status		12,884.59	272	47.37	**.04**	**.95**
5	Parity by sex		11,320.90	408	27.75	**.03**	**.95**
6	Country		13,462.36	509	26.45	**.03**	**.95**
7	Sex by country		14,469.18	1,018	14.21	**.02**	**.95**
8	Parity by country		11,210.66	1,527	7.34	**.01**	**.96**
9	Parity by country	Males	6,614.86	1,527	4.33	**.01**	**.95**
		Females	6,981.70	1,527	4.57	**.01**	**.95**

Note. Statistics are reported for multi-group models, except All R. Satisfactory fit indexes are in bold

We have insufficient data to drill down to this level by partnership status, but indications from model 4 in Table 3.10 and our initial analyses of variance explained by individual differences suggest that a further substantial improvement in model fit would be obtained by further grouping the results by partnership status. It therefore appears that parity, age and, potentially, also partnership status, together represent different personal contexts in which the decision to have a child is taken, and for which we can expect different patterns of beliefs and ATT, SN and PBC to influence intention to have a child. In Sect. 3.4.5, we provide some examples of how beliefs and the effects of Att-Pos, Att-Neg, SN and TPB on intention vary by personal context within country.

3.4.5 Differences in the Effects of ATT, SN and PBC on the Decision to Have a Child in Different Contexts

The variables that define national and personal contexts do not just identify differences in the *degree* to which Att-Pos, Att-Neg, SN and PBC influence people's intention to have a child in the next 3 years, but also the *relative effect* of each of these factors on the decision. This can be seen from the coefficients in Table 3.11, which where Att-Pos, Att-Neg, SN and PBC have different patterns of effect in different contexts.

Table 3.11 Structural model for males and females, and by parity, for full sample and for Bulgaria, France and Hungary

	All respondents				Bulgaria				France				Hungary			
	All parities	PO	P1	P2+	All parities	PO	P1	P2+	All parities	PO	P1	P2+	All parities	PO	P1	P2+
n	35,914	10,469	9,621	15,824	6,834	2,214	1,821	2,799	2,936	728	540	1,668	4,445	884	1,109	2,452
Att-Pos	.23	.19	.26	.16	.23	.20	.27	.15	.28	.37	.30	.21	.51	.32	.45	.49
Att-Neg	.13	.13	.16	.16	.14	.15	.18	.12	.29	.25	.29	.36	.02 ns	.08	.12	.02 ns
SN	.41	.38	.29	.40	.42	.36	.25	.39	.28	.24	.15	.25	.27	.16	.19	.26
PBC	.26	.20	.28	.19	.26	.23	.31	.21	.26	.43	.33	.19	.26	.37	.27	.12
Var expl	*.48*	*.39*	*.43*	*.36*	*.50*	*.40*	*.42*	*.31*	*.56*	*.67*	*.50*	*.46*	*.59*	*.34*	*.46*	*.41*
Males																
n	17,885	6,286	4,300	7,299	3,250	1,380	743	1,127	1,385	379	227	779	2,122	448	494	1,180
Att-Pos	.22	.21	.26	.17	.23	.22	.22	.19	.24	.24	.25	.22	.53	.28	.45	.66
Att-Neg	.14	.14	.19	.18	.16	.18	.27	.11	.33	.40	.31	.37	.02	0.09 ns	.14	−.07 ns
SN	.41	.37	.30	.39	.42	.34	.28	.41	.27	.28	.16	.21	.25	.24	.18	.24
PBC	.25	.15	.25	.21	.25	.24	.30	.25	.25	.21 ns	.30 ns	.18 ns	.31	.64	0.31 ns	.21
Var expl	*.48*	*.38*	*.44*	*.38*	*.52*	*.42*	*.47*	*.37*	*.55*	*.59*	*.43*	*.45*	*.61*	*.62*	*.47*	*.60*

Females																
n	18,029	4,183	5,321	8,525	3,584	834	1,078	1,672	1,551	349	313	889	2,323	436	615	1,272
Att-Pos	.23	.17	.27	.14	.23	.15	.31	.14	.31	.50	.34	.21	.48	.42	.46	.38
Att-Neg	.22	.14	.14	.14	.10	.13	.10	.09	.25	.13	.31	.33	.01 ns	.05 ns	0.11 ns	0.04 ns
SN	.42	.38	.28	.40	.41	.41	.24	.37	.29	.19	.10	.30	.30	.10 ns	.21	.25
PBC	.27	.24	.32	.19	.27	.36	.32	.22	.26	0.29 ns	0.36 ns	.23	.28	.69	0.23 ns	0.16 ns
Var expl	*.49*	*.40*	*.43*	*.33*	*.47*	*.47*	*.39*	*.27*	*.59*	*.55*	*.57*	*.47*	*.57*	*.72*	*.47*	*.30*

Note: All coefficients are standardized. All coefficients significant at .05 unless marked ns (not significant)

Table 3.11 compares groups from model 7 (multi-group sex by country) and the more satisfactory model 9 (multi-group *parity* by sex and country) from Table 3.10. There is much variation between the contexts, so to simplify presentation we show details only for the sample's lowest intention country (Bulgaria), the moderate intention country (France) and the highest intention country (Hungary) for male and female respondents. To assist with the comparison, we also reproduce the values for the full sample, and provide coefficients for the full sample grouped by sex (first column, model 2 from Table 3.10), by parity (model 4; in columns two to four), and by parity and sex (model 5).

Looking first at the sample as a whole, there seems to be little difference in the pattern of effects between males and females, either when all parities are pooled or by parity. The weights of ATT, SN and PBC do, however, differ[8] – for both males and females – for different parities. The difference is particularly marked for women who are making the decision to have their second child during the next 3 years: norms have a relatively weak effect, while attitudes to positive outcomes and perceived control play a stronger role in the decision to have a second child than to have either the first or the third or subsequent child. The relative effects of ATT, SN and PBC differ even more markedly when we observe parity level differences within country by sex.

All factors are significant for all parities in Bulgaria, where the differences in the weights at parity 1 are very different from those at other parities, and significantly so for women for whom the decision to have a second child relies more than the decision at any other parity on expected positive outcomes and less than any other parity on perceived social pressure from others. Bulgarian men appear to be more concerned at parity 1 about potential negative outcomes and control (effectively, the ability to provide for the child) than at other parities. Indeed, in terms of variance explained, the model is best able to explain the decisions of males with one child (47 %), as well as women with no children (47 % – but the most influential factors are different for this group: SN and PBC). It is least satisfactory for women who already have two or more children (33 %).

In France, with smaller sample sizes, PBC has a significant effect on the decision to have a child when the sample is divided by parity only when scores for males and females are pooled. In all parities, and when pooled or divided by sex, PBC has a similar effect to attitudes to positive outcomes (Att-Pos). But the relative effects of each factor vary with parity and for males and females with parity, The effect of PBC declines as parity increases, perhaps indicating that France's family policies provide a perception of control which increases as family size increases. At the same time, attitudes to negative outcomes play the strongest role for males in France and for females who have had at least one child, while attitudes to positive outcomes have the strongest influence on intention to have a child for women who have not (yet) had a child.

[8] Differences discussed in the text are significant at $p = .05$, based on the AMOS Critical Ratio for the difference between two parameters.

By contrast, attitudes to negative outcomes, at least as measured in the GGS, have little or no influence on males' or females' decision to have their first or subsequent child in 3 years in Hungary, the highest intention country in the sample. Instead, with the exception of childless males, attitudes to positive outcomes has a strong effect for both males and females. The effect of PBC is even stronger, again for both males and females, at parity 0.

3.4.5.1 Differences in the Role of Beliefs

The extent to which the measured beliefs reflect Att-Pos, Att-Neg, SN and PBC is quite similar for males and females within each country. The most striking difference is that attitudes to negative outcomes reflects beliefs about female employment opportunities more strongly for females than males.

As Table 3.12 illustrates, there are some differences in the role of beliefs across countries and for different parities within country. One exception is joy and satisfaction, which consistently reflects Att-Pos well. Expected certainty in life is more important in Bulgaria than France (no data are available for Hungary), and of low importance in France for P2+. Expected care and security in old age is more important in Bulgaria than in France and Hungary, and is of particularly low importance among childless respondents in France.

3.5 Discussion

The work presented here demonstrates the value of taking a social psychological approach to micro-level modeling of fertility decision making, but it also shows that there is much scope for further work. In this section, we consider several issues that might be pursued in future research.

We have demonstrated empirically that the beliefs underlying Att-Pos, Att-Neg, SN and PBC and the effects of Att-Pos, Att-Neg, SN and PBC on the decision to have a child differ by both national and personal context. Better fit between data and model is obtained the more fully the model differentiates between personal contexts. But, theory is the primary basis for definition of context, and indeed, we began with theory. From a social psychological point of view, a single, young heterosexual male with no children and no job in Italy asked to indicate whether he plans to have a child in the next 3 years is making that decision in a very different context to a 34-year old mother of one child with a part-time job or a working mother in Germany, and so on. Both theoretically and empirically, it is necessary to identify the contexts in which the beliefs that are salient to the decision to have a child differ from one another, and between which we are likely to see differences in the effects of Att-Pos, Att-Neg, SN and PBC on the decision to have a child, and to define relevant beliefs for those contexts.

Table 3.12 Measurement model for Bulgaria (lowest intention), France (moderate intention) and Hungary (highest intention), by parity, males and females

	Bulgaria			France			Hungary		
	PO	P1	P2+	PO	P1	P2+	PO	P1	P2+
Males									
Att-Positive Outcomes									
Certainty in life	.90	.87	.89	.74	.80	.81	.86	.75	.85
Joy and satisfaction	.73	.74	.71	.79	.75	.73	na	na	na
Care, old age	.68	.69	.71	.19	.50	.58	.50	.40	.58
Att-Negative Outcomes									
Limits possibilities	.73	.79	.75	.71	.66	.63	.94	.71	.67
Financial situation	.85	.79	.82	.77	.82	.66	.32	.51	.53
Woman's work opps	.48	.46	.54	.59	.49	.57	.38	.49	.51
Subjective Norm (SN)									
Relatives	.96	.98	.97	.89	.94	.92	.94	.92	.96
Parents	.94	.94	.95	.85	.76	.72	.90	.92	.93
Friends	.88	.89	.94	.80	.79	.88	.76	.82	.84
Females									
Att-Positive Outcomes									
Certainty in life	.89	.86	.90	.68	.69	.72	.85	.85	.87
Joy and satisfaction	.80	.78	.70	.85	.77	.84	na	na	na
Care, old age	.68	.70	.71	.25	.47	.61	.39	.43	.54
Att-Negative Outcomes									
Limits possibilities	.76	.76	.75	.63	.57	.57	.93	.80	.74
Financial situation	.76	.78	.77	.71	.83	.73	.41	.42	.43
Woman's work opps	.75	.76	.78	.72	.71	.59	.49	.66	.69
Subjective Norm (SN)									
Relatives	.97	.97	.97	.93	.88	.87	.90	.96	.95
Parents	.94	.93	.95	.86	.75	.72	.88	.82	.90
Friends	.90	.87	.90	.76	.81	.79	.83	.69	.82

Note. All coefficients are standardized and significant at $p < .01$

This work relies on data that had already been gathered for the GGS population survey. The beliefs were pre-defined, based on population surveys going back about 20 years (Liefbroer et al. 1994), and no pre-survey elicitation studies of the kind recommended for the TPB (Fishbein and Ajzen 2010) were done. Because of the broad scope of the GGS sample, the items were chosen to be as relevant to as many respondents as possible. In fact, as we have seen from the descriptive statistics and measurement models, few sets of beliefs provided completely satisfactory measurement models in any context, and none provided sound measurement models in all contexts that we compared. This leaves considerable scope for elicitation of salient beliefs for the decision to have a child from both males and females in specific contexts at different stages of the life course.

Shortcomings and differences in the measurement models also raise questions about whether the results we have presented are truly comparable. We believe that

they are because of the way that we used latent variables in structural equation modeling. We proposed the existence of comparable Att-Pos, Att-Neg, SN and PBC in each country, then measured the ability of each of the measured beliefs to reflect these latent variables. Nonetheless, stronger measurement models based on a set of beliefs relevant to each context might produce a different set of results. We believe this would be a more meaningful comparison at the aggregate level than comparison of a latent variable based on a set of common beliefs that are salient only to a subset of respondents. The question of whether the results would be comparable would still remain: if PBC means control over different factors in different contexts (e.g., for different parities), can it still be compared?

3.6 Conclusion

Our results show that national context matters. There are differences across countries in the way people make their decisions about having a child. Successful implementation of family policies in one country may therefore not transfer to other countries.

We have also shown that the relative influence of attitudes, subjective norms, and perceived control on the decision to have a child varies across countries, with parity, and between men and women as they go through their life course. Age also makes a difference.

But, the differences are not consistent within country, or for all males or females, or for a specific parity or at a given age. Each stage of the life course is associated with a different set of considerations, and policy making needs to keep this variety in mind. As noted in the REPRO project, a set of stable policies that support families through the life course is likely both to provide the most suitable environment for reproductive decision making and to be manageable in the face of the variety of factors taken into account by men and women as they make the decision to have a child at different moments in their lives (Sobotka 2011).

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Chapter 4
Influences on the Link Between Fertility Intentions and Behavioural Outcomes

Lessons from a European Comparative Study

Zsolt Spéder and Balázs Kapitány

4.1 Introduction

This chapter focuses on the factors that explain whether committed and short-term fertility intentions are realised or not within a given time interval. As such, this study is closely linked to research that analyses discrepancies between fertility intentions and actual behaviour (Davidson and Beach 1981; Davidson and Jaccard 1979; Heaton et al. 1999; Monnier 1989; Philipov 2009; Quesnel-Vallée and Morgan 2003; Schoen et al. 1999; Spéder and Kapitány 2009; Testa and Toulemon 2006; Westoff and Ryder 1977). An increasing number of publications on this subject are being published today, and the research field is becoming increasingly differentiated. These scientific efforts have resulted in numerous discoveries, in turn triggering further questions, but first and foremost they have confirmed that an understanding of *how* childbearing decisions are formed is crucial to understanding actual childbearing decisions. Furthermore, they have also stressed that more attention should be paid to understanding the meaning of fertility intentions and behaviour besides its "accurate measurement". Naturally, empirical results are influenced by variations in the ways intentions are conceptualized and operationalized. Numerous mechanisms that might alter intentions have been identified (Iacovou and Tavares 2011; Liefbroer 2009). In addition, a number of social categories and situations have been identified (Quesnel-Vallée and Morgan 2003; Schoen et al. 1999; Testa and Toulemon 2006) which contribute to higher chances of realising fertility intentions.

In this chapter, we concentrate on people who have *positive intentions* to have a(nother) child within a given period of *time*. Therefore, we are not interested here in the behaviour of people who *do not* plan to have a child within a given time period. Successful realisation is measured by the birth (or not) of a child

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within the given period of time. In analysing the behaviour of people with positive short-term intentions, we wish to understand the factors that support or hinder the realisation of fertility intentions. Furthermore, we are also interested in which social groups maintain or abandon their short-term childbearing intentions when they fail to realise them. Lastly – and pre-eminently – since we would like to reveal universal and country-specific factors, we use a comparative method.

Much recent research on fertility intentions, and on the intention–realisation gap, has made use of the Theory of Planned Behavior (TPB) approach developed by Ajzen (1988, 1991). This approach is extremely helpful in understanding the formation of intentions (see Chaps. 1 and 3 in this book), and it is also thought to aid understanding of fertility behaviour, since it assumes a very close relationship between intention and behaviour (Ajzen 1988). This study can be situated within the TPB framework, but it also highlights a feature of TPB, namely the intention–behaviour link, on which relatively little fertility research has yet been carried out.

The chapter is structured as follows. In Sect. 4.2, we outline the TPB framework from the perspective of intention–realisation, and we discuss the relevant research results on the gap between fertility intention and behaviour. In addition, we discuss the relevant social-psychological literature about the intention–behaviour link in general. In Sect. 4.3, we review relevant research findings on the factors included in our empirical analysis. The construction of hypotheses is based on these considerations. The discussion is restricted to those variables that were available in all four countries' data sets. The methodological section, Sect. 4.4, starts with an outline of fertility developments in the four selected countries, and continues with a description of the methodological tools and datasets employed. In discussing the results in Sect. 4.5, we stress the universality of some of the influences, but also identify some country-specific features. Furthermore, we draw attention to the potential effects of socio-economic and attitudinal differences in understanding fertility decision making. We argue that a more extended set of such variables would yield valuable and novel results. Finally, we highlight the effects of socio-economic and attitudinal differences in understanding fertility decision making in Sect. 4.6.

4.2 Highlighting the Intention–Behaviour Link in the TPB Approach

In this section, an overview of the literature is presented, with the aim of summarising research findings and improving our understanding of the observed discrepancy between fertility intention and behaviour. Although we are primarily interested in relevant demographic findings, we cross the disciplinary boundary of demography and incorporate results from social psychology, since the basic approach employed, the TPB, is social-psychological in nature. As we describe later on, the interdisciplinary perspective has numerous advantages, yet also presents difficulties, namely that including results from population research into the TPB is not always

straightforward. Our task is therefore to explore how the theory and research findings of TPB can be combined with the reasoning and results of demographic and sociological research.

4.2.1 Relationship Between Fertility Intentions and Behaviour in the TPB

The TPB places great emphasis on understanding which factors and mechanisms influence the formation of intentions, as discussed in Chaps. 1 and 3. The relationship between intention and behaviour appears to be rather straightforward. Ajzen depicts this as follows: "Intention is… assumed to be the immediate antecedent of behaviour" (Ajzen 2002, p. 179).[1]

At the heart of the TPB is the explanation of the emergence of intentions from attitudes, subjective norms and perceived behavioural control (Fig. 1.3). We draw attention, in addition, to the role that perceived behavioural control plays (unlike attitudes and subjective norms) in influencing behaviour as well as intention.

The role of factors described as *background factors* in the TPB (Fig. 1.3) is especially important from the standpoint of demographic and sociological research. According to the TPB, aspects of social structure (e.g., social status, educational attainment and ethnicity), demographic characteristics (e.g., age, parity and sex), personality traits and general value orientations (religiosity and traditional vs. modern attitudes towards gender roles) influence the beliefs that shape attitudes, subjective norms and perceived control (Fishbein 1972). In terms of childbearing decision making, for example, educational attainment, age, parity and religiosity are expected to influence general and normative beliefs about childbearing and perceptions about barriers to childbearing. Importantly however, according to the TPB only those factors that remove actual voluntary control directly affect behaviour (Ajzen 1988).

The actual short-term fertility intention is usually a result of careful deliberation: people at a given point in time consider the particular aspects of having a child (including financial, emotional advantages and disadvantages), how important certain aspects are for them, how much they perceive significant others' expectations regarding childbearing, and finally perceived barriers to childbearing.

4.2.2 Measurement Issues

It has been suggested that the mixed results on the link between intentions and behaviour is at least partly due to inappropriate measurement of intentions and behavioural outcomes (Miller and Pasta 1995, p. 531). Differences between fertility

[1] In Miller and Pasta's sequential decision-making model (Miller and Pasta 1994, 1995), the relationship between intention and behaviour is also direct. As Testa and Toulemon (2006) state, intentions are almost viewed as actions, "decision made but not yet executed".

intentions and behaviours are highly dependent on the concept and operationalisation of intentions and on the fit between the ways in which intentions and related outcomes are measured.

In the literature three different kinds of conceptualisations of fertility intentions can be identified: (a) family size intentions; (b) intention to have any (more) children; (c) intentions to have a(nother) child within a given time period or at a given age. Depending on the measure of intention used, fertility behaviour should be measured parallel and thus refer to: (a) completed fertility; (b) at least one birth before ending of the 'fertility career', (c) childbirth within a given period of time or before a given age. It is not surprising to observe low correlations if the intention is measured, for instance, without any time frame, but the behaviour is observed within a given time period (e.g., Westoff and Ryder 1977).

To avoid measurement errors, it would appear to be crucial to incorporate at least two dimensions: time and certainty. All research incorporating the *time* dimension concludes that the closer the time between (measurement of) intention and behaviour, the better the correspondence between intention and the behavioural outcome, and the less failure in intention realisation. Most probably, with an increasing time frame, both intentions and the context of the behaviour change, resulting in a lower correspondence between initial intention and subsequent behaviour. Indeed, a narrower time frame decreases the chance of changing intentions (Ajzen 1988; Davidson and Jaccard 1979; Schoen et al. 1999).

There is clear consensus that the certainty of the intention (or the commitment to the behaviour) matters as well. Several surveys measure intention only with a dichotomous (yes/no) answer, but some of them also include the degree of certainty. These studies offer statistical proof that the certainty of intentions increases the chances of realising childbearing intentions (Westoff and Ryder 1977; Rindfuss et al. 1988; Schoen et al. 1999; Testa and Toulemon 2006; Philipov 2009).[2]

From a general point of view, the need for more exact measurements of the certainty and time frame of the intention should be stressed. And from the point of view of a comparative perspective, the use of the very same concept of intention and behavioural outcome should be highlighted as well.

We should also briefly mention the role of biological and emotional factors, as these factors have a clear influence on intention realisation, but are usually not measured in empirical studies. Fecundity has an explicit role in the model of Miller and Pasta (1995, p. 534), and Ajzen also refers to it as the most important barrier to realising intentions (Ajzen 1988, p. 129); demographic studies also highlight this factor (Rindfuss et al. 1988). Emotions have the same role in Ajzen's concept as biological incapability: they can disrupt the intention–behaviour relation (Ajzen 1988). It is out of the scope of this study to evaluate biological and emotional factors in general. However we assume that these factors, if influential, will not differ particularly between countries.

[2] We should not forget that Ajzen and Fishbein suggest measuring the intention with a seven-point scale, ranging from likely to unlikely (Ajzen and Fishbein 1980, pp. 107ff., 140).

4.2.3 Partners and Partnership

Decision-making processes in modern societies are often regarded as instances of individual action. TPB also operates within this framework: an individual's intention and behaviour, attitudes, subjective norms, etc., are considered. At the same time, earlier research focusing on childbearing decisions has revealed the importance of partners' joint decision making and highlighted the role of partners' behaviours, although generally focused on women' fertility behaviour (for an overview see Thomson 1997). Surveys that include partner interviews might reveal how important it is to include partners' intentions (Miller and Pasta 1995; Thomson 1997; Berrington 2004; Philipov 2009). Therefore, in the case of non-partnered samples, information about partners' agreement is very important.

Davidson and Beach reveal how within the TPB partners' intentions could contribute to behavioural changes (Davidson and Beach 1981). The partner is the "most relevant other" in the case of intention–formation: changes in the commitment of the partner modify the intention via subjective norms (ibid.).

To sum up: all research that queries the intention of both partners concludes that high partner agreement strengthens the link between fertility intention and subsequent behavioural outcome (childbirth) (Miller and Pasta 1995; Thomson 1997; Berrington 2004; Philipov 2009; Iacovou and Tavares 2011).

4.2.4 On the Nature of Attitudes and Behaviours

A full overview of the literature on the strength and stability of attitudes would exceed the framework of our study. Nevertheless, it should be stressed that attitudes differ in their strength. Put differently, there are significant differences between attitudes in terms of the durability of their behavioural influence (Krosnick and Petty 1995). There exists a general consensus that attitudes of people based on their direct and personal experience last longer (Davidson and Jaccard 1979, p. 1373). Others highlight that the more important an attitude is for an individual, the longer it lasts and the stronger the effect it has on behaviour (Bohinger et al. 1995). Both these observations may be caused by a mechanism whereby attitudes which have been formed as a result of a complex process of information searching and processing seem to be more durable (Petty et al. 1995, p. 94ff.). The importance of an attitude goes hand in hand with permanent processing of relevant information and personal experience about the subject of the attitude incorporates acquisition of new information as well. Finally, those attitudes are more stable which ascribe responsibility to the self (see Davidson and Jaccard 1979, p. 1373). Why are these aspects important for our research regarding the interpretation of the TPB? Childbearing is an important, irreversible decision, which significantly changes an individual's life. It is therefore reasonable to assume that this decision is preceded by extensive information gathering. Thus, it is not unrealistic to hypothesise that attitudes attached to childbearing are not highly volatile.

Can we state that the strength of childbearing attitudes is equal in all concerned individuals across different social categories? We cannot provide a straightforward answer, but as a working hypothesis we assume that certain social groups and/or life situations may differ in this regard. For example, we can be sure that an individual having a child is more informed about child rearing than a childless individual, even if the latter has had lots of contact with children. The assumed differentiation can lead different social groups to have attitudes of varying strength and duration. Through numerous steps it can result in a scenario where social groups differ in their ability to realise their intentions (which are based on norms and attitudes).

In their work analysing the "failure" of childbearing intentions, Davidson and Beach (1981) elaborate on and empirically prove the existence of a very persuasive mechanism termed the "inertia effect". One of their starting points is the hypothesis that "attitudes and behaviours may have different thresholds" (ibid., p. 476). This implies that a change of attitude can more easily bring about a change in intention than an actual change in behaviour. In order to change behaviour, a very strong change in attitude is necessary. Turning to childbearing, they assume that "contraception" is the routine ("baseline") option in a modern society. In order to achieve childbearing, one needs to "suspend" this routine and to want to bear a child. Accordingly, if there are two behavioural options to choose from, and one of them is the maintenance of an already existing form of behaviour, then selection of the new alternative has a lower rate of realisation. Concerning childbearing in modern societies, they claim that "I use contraceptives" can be considered to be a behavioural pattern maintaining the status quo, and the decision to have a child is the real decision. Hence, the negative intention ("I do not want to have a child") is realised with higher probability than the positive one ("I do want to have a child"). Their empirical analysis supports this hypothesis.

Barber (2001), Philipov (2009) and to some extent Morgan and Rackin (2010) focus their attention on competing life goals, and by this they shift their focus from "shall I have a child or not" to "shall I have a child or shall I realise my other objectives (education, career, travelling, etc.) here and now (in the short term)". According to Barber's results, attitudes towards life goals that compete with childbearing (including career, employment and consumption) affect non-marital childbearing to a greater degree than attitudes about childbearing (Barber 2001). Concluding, she suggests extending the TPB, suggesting that if one includes also attitudes of competing life goals in the model then childbearing might be better predicted. Even though she does not elucidate exact details about where to include them in the TPB model, we assume that she refers to the effect of these attitudes on the emergence of intentions. We complement this by asking whether attitudes towards alternative life objectives do indeed influence the durability of intentions, and whether it can affect differentiation of intentions and their realisation by social groups.

4.2.5 (Un)expected Life-Course Events Causing Intention Revision

All of the three antecedents (attitudes, subjective norms and circumstances) of a given intention are subject to change if the time frame is broadened. The primary mechanism at play may be closely related to life-course development. Miller and Pasta (2004) emphasise events connected to partnership dynamics (e.g., separation and divorce), and Rindfuss et al. (1988) claim that these events alter the context of action, which strongly determines its success. The difference between fertility intentions and behaviour was demonstrated within the framework of the TPB by research on existing small samples covering 1–2 year-long periods: they found attitude change and consequent alteration in fertility behaviour (Davidson and Jaccard 1979).

From the perspective of our analysis, studies about differences between intended and realised number of children, and changes of family size expectations throughout the life course are of high importance. Even though the subject and time frame of these studies differ from our current inquiry, we still believe both short-term and next-child related intentions are strongly related. Morgan and Rackin (2010) focus on a crucial question, namely how unexpected and unplanned events influence family size expectations, and how they affect under- and overachievement of individual fertility goals. Their results prove that "current intent cannot take account of future unanticipated factors that can influence fertility" (p. 111). A sudden change in relationship status (divorce) goes hand in hand with underachievement of fertility intentions. We are able to demonstrate similar consequences regarding short-term fertility intentions as well (Spéder and Kapitány 2009). Divorced people are much more likely to delay childbearing than people who remain married, and this continues even when divorced people remarry (Morgan and Rackin 2010). On the other hand, earlier-than-planned or unplanned childbearing does significantly increase the chance of "overachievement" (Morgan and Rackin 2010). It is probably safe to assume that the same mechanism could work in cases where anticipated events do not happen. That is, 'we will have a child when we have finished the construction of our new house', or 'if my migrant partner returns from abroad where (s)he works', etc. Provided that the anticipated events *do not* happen or they do but with some delay, intentions cannot be realised.

Liefbroer (2009) provides us with numerous insights that aid understanding of the TPB's decision-making model and is relevant for our empirical analysis. He investigates change (mostly decline) in family size intentions (expected family size) as a function of time and life-course change. Based on the life-course perspective and on the theory of life-span psychology by Heckhausen, age (proceeding along the life course), relationship status, educational attainment, together with planned (childbearing) and unplanned (change in relationship status) life-course events play a major role in changing and 'downsizing' expected family size. When do intentions change to the greatest degree, and when does the expected number of children decrease? The expected number of children decreases with ageing: among single

and cohabiting people, with increasing time spent in employment, among women with a high level of education particularly when they are older; in cases of childlessness and low parity, whose effect increases with age. Alterations are caused by unfolding of the life course, and also by constantly changing opportunity structures (Liefbroer 2009, p. 383). The process of ageing can shed light on problems of fecundity and conflicts between career and family and may also become more apparent than may have been apparent earlier on in the life course. Why is this important for our analysis? We believe that the difference between intention and behaviour is to some extent a consequence of changing intentions. Iacovou and Tavares (2011) studied factors influencing the alteration of expected family size within the REPRO project. Their results shed light on changes of intention in relation to time (age, time since the birth of the last child) and relationship status (equal or different intentions, divorce, moving together). Younger people tend to change their intentions more often than older individuals. Moreover, if much time has passed since the birth of the last child (four or more years), then respondents hardly modify their intentions: they do not wish to have more children and they do not change their intentions. Consequently, some ages and life situations favour change of family size expectations more than others (Iacovou and Tavares 2011).

4.2.6 Group-Specific Behaviour: Social Status and Demographic Position

A challenge to the TPB is constituted by research which finds that social categories and demographic positions also have an effect on fertility behaviour (besides fertility intention). These results show that the above factors influence fertility behaviour not only indirectly, through the formation of intentions by attitudes, subjective norms and perceived control variables, but that they have a direct effect as well. Examples of such direct factors include relationship status (Berrington 2004; Heaton et al. 1999; Morgan and Rackin 2010; Schoen et al. 1999; Spéder and Kapitány 2009) and number of children (Morgan and Rackin 2010; Schoen et al. 1999; Spéder and Kapitány 2009). In addition, aspects like highest level of education (Morgan and Rackin 2010; Schoen et al. 1999), unemployment (Rindfuss et al. 1988; Testa and Toulemon 2006), religiosity (Jaccard and Davidson 1976), optimism (Spéder and Kapitány 2009) and general attitude to gender roles (Berrington 2004) are also worth considering according to these empirical studies.

In considering this problem we should mention some findings that explicitly tested but could not prove the direct effects of the mentioned factors on the fertility intention–behaviour link (Miller and Pasta 1995). We have to note, however, that these studies were conducted on rather homogeneous samples (e.g., married couples, people living in one town, white individuals, etc.).

The (probable) direct influence of background factors leads to the question of how these factors produce an effect on the relationship between behaviour and

intention. The TPB allows for two different interpretations. The first is based on the fact, noted above, that significant lapses of time between the measurement of intentions and actual behaviour and independent changes in social factors (situations) create different contexts. In other words, changing social and demographic situations modify the subjective antecedents of the intentions resulting in a revision of existing intentions. Had we measured fertility intentions closer to actual behaviour, then no other factors besides intentions would have influenced that behaviour. The second interpretation considers that the background factors affect behaviour through perceived/actual behavioural control. Socio-economic features and demographic situations indicate different distributions of resources and skills, and these in turn determine various behavioural options. That is, the above factors contribute to the character of the intention–behaviour relationship through obstruction or inhibition of planned behaviour.

Closely related to the second argument, we cannot reject an interpretation linked to the stratification of social action either: different social statuses and varying demographic situations have different behavioural options and barriers associated with them, independent of whether they are perceived or not. A study by Morgan and Rackin (2010) presents numerous examples of these kinds of considerations. They claim that certain environments hinder individuals in the realisation of their fertility plans. Even though women may have a committed and determined child-bearing intention, when working in traditional male jobs the long working hours and challenging environment are conducive to postponement of intentions despite providing them with high income, social prestige and self-realisation. In this perspective, the non-realisation of plans is interpreted as resulting from "structural constraints" (p. 92). At the same time, the powerful normative ideal of the two-child family makes realisation of the second child intention most successful. This line of argumentation can only seemingly be interpreted within the TPB framework. That is, the two-child family ideal influences the strength of intention through subjective norms. If, however, this is the only mechanism at work, then it would have to have an effect on the emergence of intentions instead of on the realisation of intentions. Therefore, norms not linked to individuals can be interpreted as external inhibiting factors.

Although our empirical analysis will not be able to provide exact answers about these mechanisms, we will return to these issues in our overview of factor-specific effects and in the summary following the modelling.

4.2.7 Macro-social Context

Little is known about how the macro-social context influences the relationship between intention and behaviour. It might be assumed that, since the TPB framework is seen as universal, different macro-social contexts should not have specific influences. Alternatively, Ajzen (2011) prefers to describe the TPB as not specific to any domain, noting that it is up to scholars in a specific domain to define relevant

influences for that domain. In any case, clear empirical evidence on the role of the macro context is only just emerging.

Two studies stress the importance of the prevailing normative structures (majority rules) in a given society. Westoff and Ryder relate inconsistency to non-conformity, and assume that if people plan behaviour in opposition to dominant patterns of behaviour in a given social context, or in other words if their intentions are non-conformist, then their behaviour will actually tend to conform. Namely, there is a higher likelihood that non-conformist intentions will be abandoned (Westoff and Ryder 1977, pp. 443–445). Testa and Toulemon expect that a "low fertility context" promotes postponement (failure of positive intentions) and decreases the risk of the birth of "non-desired" children (failure of negative intention) (Testa and Toulemon 2006, p. 45). In general terms, prevailing norms may restrain non-normative behaviour, and this may be a crucial factor in our field of research. These examples resemble the "inertia-effect": to carry out 'unusual' or non-standard behaviour we need a stronger motivational force (Davidson and Beach 1981).[3]

Some studies also contemplate on possible period effects on the intention behaviour gap. Rindfuss et al. noticed the varying rate of realising negative and positive fertility intentions in time, and they assumed that this fluctuation was caused by a specific periodic context ("strong delaying effects of period factors" Rindfuss et al. 1988, p. 198). Davidson and Beach observed the modification of childbearing intentions in a small-scale longitudinal fertility survey, and identified measurable and significant changes in perceived social norms, assuming that these changes mirrored period effects of the economic recession in the years 1973 to 1975 (Davidson and Beach 1981, p. 486.). They found that women perceived that their husbands had become more negative towards childbearing as a result of the economic recession.

More recently (within the REPRO project), we stressed the negative effects of an anomic societal context on fertility intention realisation (Spéder and Kapitány 2014).[4] We found that the two post-Communist countries exhibited higher levels of failure in realising short-term fertility intentions. We concluded that in the two studied post-Communist countries the failure of intentions could mostly be traced back to anomie emerging from the asynchronous changes of the value system and the structural circumstances of childbearing. This is particularly due to the fact that the value system reflects the pre-transition society even one decade after the democratic transitions (something we termed "cultural lag"). Moreover, postponement owes to the fact that institutional and economic transformations not only have "run forward", but their pace – even after the millennium – is still higher than the dynamics of comparable modern societies. Altogether, it results in a constant discrepancy between anticipated and real living conditions, which in turn leads to the modification of short-term childbearing decisions and postponement of intentions. The weaker relationship between intentions and realisation observable in the post-Communist countries is mainly due to the social context, that is, the distinct pace of social change.

[3] Additional insights that emerged from REPRO are summarized in Chap. 7. Eds.

[4] See also the argument of Rodin (2011).

4.2.8 Revisiting TPB and Fertility Behaviour: Matches and Challenges

Numerous considerations can be found in the review presented in the previous sections, which help us understand the "difference" between fertility intentions and behaviour. What is more, we introduced relations – the effects of unexpected events, the timeframe of intention and behaviour – which *predict the constant occurrence of difference* between intentions measured at a given time and behavioural consequences registered at a different point of time. Our objective in discussing such aspects was to analyse how much they match the logic of the TPB. It becomes apparent that numerous descriptive mechanisms can *easily be accommodated into the logic of the TPB*. Nevertheless, it is worth articulating some relationships, which do not match in a straightforward manner to the TPB, and which could constitute a challenge to it. As we noted earlier, the fact that the relationship between intentions and behaviour in certain social categories seems to differ in strength can hardly be reconciled with the universal action theory of the TPB, given that the TPB clearly argues that background factors affect attitudes and subjective norms through beliefs. Even if we accept arguments that background factors constantly shape beliefs and by this attitudes as well – and consequently, had we measured intentions close enough in time to behaviour – we might not have found structural effects. However, we still think that it is worth considering three further mechanisms, which we illustrate in Fig 4.1.

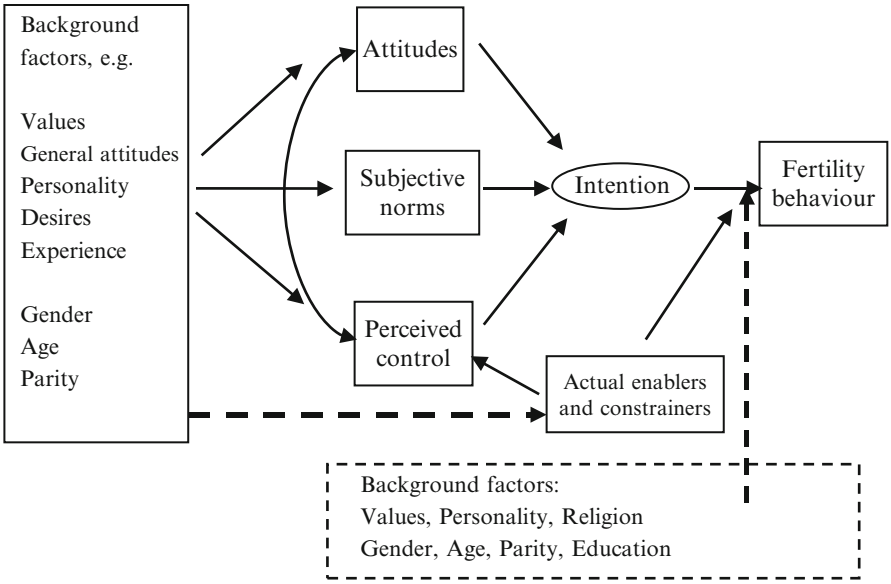

Fig. 4.1 Possible additional mechanisms (*dashed*) overlaid on the schematic representation of the Theory of Planned Behavior

On the one hand, one can hypothesise that *specific social categories* have a different resource and opportunity structure, which can either facilitate or hamper the realisation of intentions (Morgan and Rackin 2010). Group factors therefore influence the realisation of intentions through perceived behavioural control, or unreflected through actual hindering factors. On the other hand, we should not reject the argument that social (e.g., religious or educational) groups might differ in the strengths of their intentions.

The TPB prefers to include the influence of norms via important others (subjective norms). We favour the concept that in modern societies internalised norms shape behaviour (Liefbroer and Billari 2010). However, we do not know how internalised norms can be incorporated into the TPB, since internalised norms are not expected to change via modifications of important others' expectations.

Finally, how can we incorporate *contextual effects* into the model, namely, the fact that in different societies chances of realising one's intentions might differ? According to the logic of TPB, contextual factors are taken into consideration during the formation of intentions (see Jaccard and Davidson 1976, p. 333ff). The systematic and massive cross-national differences in realisation, however, indicate that important and crucial societal circumstances are not perceived or misjudged. Whether it means that there are also non-perceived constrains and enablers operative, or whether perceptions, for whatever reason, are distorted, we cannot answer, and this remains to be explained by future research.

In our empirical analysis, reported in the next sections, it is not possible to comprehensively answer all the questions that have been posed. Yet the analysis sheds light on the social differences in the intention–behaviour relationship.

4.3 Building Hypotheses on Factors That Influence the Intention–Behaviour Link[5]

When studying the determining factors of realisation and non-realisation of fertility intentions, it would be tempting to take all the studies analysing social determinants of fertility behaviour into account, particularly those that reveal social and attitudinal factors influencing the decision to become a parent or have subsequent children. Even though these studies are undoubtedly important, in our analysis we (a) concentrate on literature that focuses explicitly on fertility intention variables, and (b) limit ourselves to longitudinal studies: studies measuring intentions at certain points of time, and which relate these intentions to subsequent childbirth. Since we described the concept and operationalisation of the intention and outcome variable as being of high significance, we define our dependent variable before proceeding with the detailed literature review of possible influential societal factors.

[5] The comparative analysis of group-specific effects was published in a slightly modified manner in *Population* (Kapitány and Spéder 2012). Consequently, there is some overlap between that publication and the following two sections. However, this chapter, which focuses on the TPB and the results of the empirical analysis, uses new argumentation.

4.3.1 The Dependent Variable of the Analysis

The methodology and construction of the key dependent variable employed in this study draw on the experiences of Heaton et al. (1999). In their study, they concentrated not only on the fulfilment or failure of fertility intentions, but also analysed changes in intentions over given periods of time. In addition, work carried out by Berrington (2004), who used multinomial regression techniques for a similar analysis, and the approach of Iacovou and Tavares (2011), has helped inform our research from a methodological point of view.

As mentioned, our investigation concentrates on time-related intentions and outcomes, and both aspects of fertility behaviour are included in our dependent variable. On the one side, we only consider those who want to have a child within a given time period, and on the other side we differentiate three end states (outcomes) at the end of the time period. Those who intend to have and succeed in having a child within the indicated time period[6] are called *intentional parents*. Since we are also interested in how reversible these short-term intentions are, we group people who do not realise their intentions before the end of our time-window into two groups: those who maintain their intention to have children are classified as *postponers*, and those who give up their plans are classified as *abandoners*. Table 4.1 shows our typology, and the construction of our dependent variable.

4.3.2 Potential Factors Influencing Intention Realisation

4.3.2.1 Age

Previous research indicates that a respondent's age has a remarkable effect on the realisation of intention. Much research highlights (directly or indirectly) that younger respondents have higher chances of realising their fertility plans than older respondents. A study carried out by Noack and Østby (2002) about fertility expectation and realisation stresses the salient role of demographic factors, and concludes

Table 4.1 Basic types of positive fertility intentions and outcomes

Fertility intention-outcome types	Fertility intention within 2 years (at the 1st wave)	Had a birth within 3 years (between the 1st and 2nd wave)	Intend to have a child at subsequent wave (the 2nd wave)
Intentional parents	Yes	Yes	–
Postponers	Yes	No	Yes
Abandoners	Yes	No	No

[6]The fact that the time frame of the intention and the time period for realisation do not exactly match is due to the limitations of the different surveys we utilised.

that being younger (18–24 years) is associated with having more realistic fertility intentions. Schoen et al. (1999) show that after controlling for all the characteristics of intentions and other background factors, age remains the most significant factor in determining childbirth: younger respondents have a higher likelihood of having a child. More recently, Philipov (2009) finds that if we control for a sensitively constructed intention variable, those below the age of 30 in Bulgaria have significantly higher chances of having a child. Berrington (2004) studied a more specific group, namely childless women between the ages of 30 and 39, and also concludes that chances of successfully realising childbearing intentions decrease with age. Testa and Toulemon (2006) find that the probability of involuntary postponement[7] inevitably increased with age until the age of 32, and then stays at a high level before declining. They conclude that "those who failed to have a desired birth and still want to start a family 5 years later are probably those who cannot have a child due their advanced age and the resultant limited fecundity" (p. 65). Indeed, most of the research which finds a significant relation between failure of realisation and advanced age assumes the operation of biological factors.[8] We characterise the above-mentioned research results as the *biological-clock* concept: because fecundity decreases with age, realisation of intention will become increasingly unsuccessful as age increases. As a consequence, failure of short-term intention is more likely for those of an older age.

Some studies call attention to life-course development and lifestyle when explaining higher failure or intention downsizing at older ages. Philipov assumes that 'lifestyle' factors may come into greater conflict with childbearing decisions at later ages (Philipov 2009).

Although few reviewed research results directly support an alternative hypothesis, some approaches do suggest alternatives. Research demonstrating higher instability of intentions at younger ages (such as Rindfuss et al. 1988) suggests higher failures of intention realisation in earlier life-course phases. In a study on the relationship between intention and behaviour, Miller and Pasta assume a higher likelihood of realising fertility intentions at later ages: "The time pressure associated with higher age, longer marital life and higher age of previous child are likely to promote the occurrence of proception" (*op. cit*. p. 535), namely higher probability of realisation at later ages. However, analysis of their results concerning young married couples does not support this assumption. Considerations about the prevalence of age norms in modern societies (Liefbroer and Billari 2010; Heckhausen et al. 2001; Settersten and Hagestad 1996) also suggest a higher likelihood of realisation at older ages. According to the life-span theory of control worked out by Heckhausen et al. (2001), people approaching the end of their fertile period intensify efforts to realise fertility intentions. Since people are conscious of the deadline – and a social deadline does

[7] Testa and Toulemon's "involuntary postponement" corresponds perfectly with our "postponer" category.

[8] Shown by Leridon (2008).

exist (Mynarska 2009) – we can assume that people approaching this age limit, whenever this happens to be, will strive to realise their intentions. Consequently, the *social age deadline* approach assumes that realisation will increase with age.[9]

Considering the two outcomes of failures, postponement and abandonment, some results of childlessness research and intention change can help us to make the relationship between postponement and abandonment more apparent. Several studies argue that many childless individuals did not originally intend to stay childless. However, by constantly revising their intentions and by postponing a decision to have the child, they revise their initial plan and end up childless (Berrington 2004). According to the above-mentioned mechanism an abandoner can be expected to be older than a postponer. Heaton et al. (1999) also called for greater attention to be paid to the effects of age in different kinds of failures of fertility intentions. Focusing on childless people, they found not only that older people are more prone "to switch to childlessness", but also to switch from "not wanting any child to parenthood" (Heaton et al. 1999).

Investigations of intention change (Liefbroer 2009; Iacovou and Tavares 2011) very clearly show the strong influence of age in this regard. Liefbroer argues that planned and unplanned events at the beginning of the life course build up life trajectories that narrow down freedom to make decisions later on in the life course (Liefbroer 2009). He finds a clear age effect in downsizing of the expected number of children. In his summary, he describes the mechanism as follows: "As their lives unfold, they will find out that some futures become less likely than others and this might lead to a re-evaluation of their intentions" (p. 383). However, the controlled downsizing effect of age is linear, suggesting that intention change is parallel with increasing age.[10] Although the linearity implies no differences regarding the incidence of abandonment by age, based on his argument we can assume a higher rate of abandonment at later ages. The results of Iacovou and Tavares have somewhat different implications. They find a non-linear relationship, with a higher risk of intention change at younger ages (Iacovou and Tavares 2011, p. 110 ff.). Importantly, they find more changes both in upward and downward directions. This result hints that having more volatile intentions at younger ages means expecting more change to abandonment in younger ages.

Based on the above-mentioned considerations and in line with the two basic approaches (*biological clock* and the *social age norm*), we outline our hypotheses

[9] Since biological age limits differ according to gender, consciousness could also differ accordingly. Unfortunately, due to low sample size in some countries, in this study we cannot carry out a separate analysis by gender.

[10] Although he found several interaction effect of age with other variables, we do not report it here since (a) we could not include such kinds of interaction effects in our model, and (b) he has a different intention variable (expected number of children) than we use, and therefore not all of his findings are applicable to our analysis.

about the role of age in the fulfilment and failure of time-related fertility intentions as follows:

(H1a) According to the *biological clock* approach, with increasing age the chances of realising one's intention (of being an *intentional parent*) will be lower. Older people will be more prone to postpone than younger people.

(H1b) According the *social age norm* approach, with increasing age the chance of realising one's intention (of being an *intentional parent*) will be higher. Younger people will be more prone to postpone than older people.

(H1c) Based on life-course related research, we assume that abandonment is more probable at older ages than postponement (maintenance of the intention).

(H1d) At younger ages intentions are more volatile. With increasing age the chance of revising intention (abandoning and not maintaining intention in case of failure) is less probable.

4.3.2.2 Parity

Longitudinal studies usually include parity as a control variable, and therefore parity-relevant results frequently become by-products of analyses focusing on fertility intentions. Research carried out by Schoen et al. (1999), shows that respondents who have one child at a given time usually exhibit a higher likelihood of having another child in the subsequent period (up until the next interview) than childless or higher parity respondents. However, among non-married women (living alone or cohabiting), women of parity three also have significantly higher chances of having another child. In analysing the British Household Panel Survey, Berrington (2004) finds that in a given 6-year period those with no child or one child have the highest chance of realising (further) childbearing intentions. The strength of the parity effect also depends on time since last birth: the shorter the period since the last child, the higher the likelihood of having another intended child.

Studies investigating childless people stress the instability of intentions at younger ages (Rindfuss et al. 1988) and that many people do not realise and postpone childbearing intentions (Heaton et al. 1999). In the US, among childless people of fertile ages, 45 % of those who intended to have a child[11] did not realise their intention within 5 years. As noted by Testa and Toulemon (2006), in France 54 % of childless people stating "I want a child within 5 years" had a child within that 5 years period (*op. cit*. p. 57). These results allow us to argue that among childless people we can assume a low level of realisation of intention and a high level of postponement. This assumption concurs with studies which demonstrate competing and conflicting life goals (Barber 2001; Philipov 2009; Rindfuss et al. 1988), since childless people exhibit a wide range of different life goals which frequently conflict with childbearing intentions (Barber 2001).

[11] The intention did not refer to any specific time frame.

The literature about strength of attitude reviewed earlier stresses the importance of information and personal experience in the formation of attitude (Petty et al. 1995). Applying this idea to fertility attitudes reflecting different parities leads us to assume that people with one or more children may have more elaborated and therefore stronger attitudes than childless people. This suggests that first and higher parity people will have higher chances of becoming intentional parents than childless people.

Longitudinal studies investigating the realisation of family size intentions show that those intending to have two children have the highest chances of realising their initial intentions (Morgan and Rackin 2010). Moreover, those planning to have no children or one child will often end up having more, while those intending to have three or more often end up having fewer. As a result we can deduce that people with two or more children have lower chances of realisation than those who have none or only one child, and expect that:

(H2a) Childless people are more likely to postpone and less likely to abandon their plans in relation to successful realisation (to be intentional parents).
(H2b) People with one child have the highest likelihood of realising their fertility intention within 3 years.
(H2c) People with two or more children are more prone to abandon than to realise or postpone their plans.

4.3.2.3 Partnership

Many researchers claim that a cohabiting partnership (especially marriage) is a prerequisite for realising childbearing intentions (Berrington 2004; Heaton et al. 1999; Schoen et al. 1999; Spéder and Kapitány 2009; Testa and Toulemon 2006). The reasoning is quite plausible: based on the causation described in the introduction: (a) a steady partnership and intensive interaction are a clear perceived and actual enabler of carrying out action; (b) partners' beliefs and intentions are the most important factors shaping subjective norms (Ajzen 1988, p. 131; Davidson and Beach 1981; Thomson 1997). Therefore we expect low realisation of people living separately. However, partnership form (marriage, cohabitation, or living alone) is also one of the strongest factors determining formulation of short-term childbearing intentions (Billari et al. 2009; Philipov et al. 2006). Consequently, partnership form dominates the whole decision-making process from the emergence of intentions up until conception.

A more intriguing question is whether the form of partnership (marriage or cohabitation) has any effect on the realisation of intentions. Cohabiting couples in the United States are less likely to realise their intentions than married couples (Heaton et al. 1999). Heaton et al. conclude that "despite the documented increase in non-marital childbearing, a close relationship between having children and marriage persists" (*op. cit.* p. 536). In a more detailed analysis we also find that in Hungary cohabiting females are less likely to realise their positive intentions than

married ones (Spéder and Kapitány 2009). Different meanings of marriage and cohabitation could be responsible for this difference: cohabiting people might be less committed to each other than married ones (Waite and Galagher 2000). Consequently, married people's intentions could be more committed, less volatile, and therefore have higher chances of realisation.

In contrast, in some countries such as France where cohabitation is widespread, this form of partnership only has a modest effect on the chances of childbearing (Testa and Toulemon 2006). This calls attention to the notion that the meaning of 'cohabitation' may vary from country to country (Heuveline and Timberlake 2004). The four countries we analyse are interesting cases in this respect, because the popularity of cohabitation varies considerably.

It is also clear that the stability of the partnership will influence chances of realisation. (Un)expected life-course changes inevitably influence revisions of intentions and intention realisation (Heaton et al. 1999; Liefbroer 2009; Testa and Toulemon 2006). Separation or divorce will increase the likelihood of being a postponer or abandoner. Starting to cohabit or getting married will, on the other hand, increase the likelihood of being a successful realiser (intentional parent).[12] This assumption is in accordance with the social-psychological approach, since this theory suggests that (unexpected) events in the life-course discourage actors from realising their (earlier) intentions (Ajzen 1988; Miller and Pasta 1995). Based on the above-mentioned research results we expect that:

(H3a) Cohabiting people (married and living in non-marital partnerships) will have a higher likelihood of realising their intentions successfully than people living alone.

(H3b) The rate of realisation of intention will be lower among cohabitants than among the married. However, due to different meanings of cohabitation, we expect differences across the countries.

(H3c) Separation, independent of the institutional form of the cohabiting partnership, will decrease chances of realisation. We also assume that separated people will have lower chances of realisation than people living alone.

4.3.2.4 Background Factors: Educational Attainment, Activity Status, and Religious Denomination[13]

We agree with those views that assume that the fertility decision-making process is set in a specific social context and carried out by people possessing different resources and who have diverse values and attitudes (Westoff and Ryder 1977;

[12] There is no space here to examine mutual relationships between childbearing and partnership behaviour.

[13] Usually both the theoretical framework and availability of data shape the building of hypotheses. In our case the latter had a much stronger limitation: using a harmonised data set and the very limited number of comparable indicators narrowed down our options. Since we see the harmonised variables as roughly differentiated, we do not develop specific hypotheses. However we include the relevant literature review.

Rindfuss et al. 1988; Heaton et al. 1999; Schoen et al. 1999; Noack and Østby 2002; Berrington 2004; Liefbroer 2005; Testa and Toulemon 2006; Philipov 2009; Spéder and Kapitány 2009). For this reason, structural position (social and economic status) and attitudes should be taken into account when analysing childbearing decisions, and therefore also realisation of intentions.

Research results concerning *education* are ambiguous. In studies analysing US data, education usually influences the strength of the relationship between intention and behaviour. For example, Heaton et al. (1999) found that better educated individuals were more prone to postpone their intentions. In another study, which used two waves of the National Survey of Households and Families, education only operated in the expected direction amongst non-married women, either living alone or cohabiting (Schoen et al. 1999). Explanation of the results followed an economic rationale: more highly educated women invest more resources in building up human capital, and having a child therefore costs much more. The results of various European studies differ. Testa and Toulemon (2006) found that better educated French women were more likely to realise their fertility intentions. Noack and Østby (2002) on the other hand did not find any educational effect on having realistic fertility expectations in Norway.

Education can also represent the effects of economic resources (the *income effect*), and if no relevant ideational factors are present in the model, can be viewed as a proxy for value orientations. A variety of lifestyles and cultural resources are linked to education.[14] It may well be important to highlight that people with a higher level of education are generally more informed and knowledgeable, and we can assume that intended parenthood will be the most widespread among them. Lastly, the above-mentioned human capital aspect ("opportunity cost effect") should not be neglected either.

Research on different *economic activity* or *employment statuses* is abundant. Concentrating on employment status, we should highlight the effects of being unemployed on the realisation of fertility intentions. Rindfuss et al. (1988) indicate that male unemployment hinders the realisation of fertility intentions. Adsera (2005) in Spain and Testa and Toulemon (2006) in France find the same pattern: unemployment is a barrier to realising childbearing intentions. We have also found that employed men are more likely to realise their fertility intentions than unemployed men (Spéder and Kapitány 2009). This corresponds with the well-known income-effect mechanism assumed at work among males (Ermisch 2002). We can also assume that a woman's economic position can influence the realisation of fertility intentions in different ways (Kreyenfeld 2001), but we cannot find strong empirical evidence to demonstrate this.

Although values should exert influence on intention formation and revision of intentions as stated in the TPB, the inclusion of general orientations in the analysis of the intention–behaviour link should not be prohibited. If these are measured at the time of stated intention they may signal intention strength and/or inclination to

[14] Employment motivations also differ. For example, career dominates among those with a higher level of education whilst those with a lower level of education are more concerned with making ends meet.

revise intentions. Here we follow studies pointing to the additional effects of subjective factors (Berrington 2004; Heaton et al. 1999; Philipov 2009; Spéder and Kapitány 2009). Heaton et al. (1999) included several ideational variables, and general value orientations, etc., in their analysis (Heaton et al. 1999). Some of their results are not unexpected: strong leisure orientation inclines people to postpone (as a result of 'competing attitude'), and agreement with the sentiment that mothers' employment is harmful to children supports realisation; surprisingly, career-orientation did not have a significant effect. Berrington (2004) showed that gender role attitudes, particularly more egalitarian ones, increased the chances of childless females in their thirties conceiving a child. We revealed previously that in Hungary secular beliefs among women increase the likelihood of being an abandoner and that being male with a positive "future outlook" contributes to being an intentional parent and not an abandoner (Spéder and Kapitány 2009).

Unfortunately, our harmonised comparative data set provides only very limited opportunity for comparing ideational factors, and we can therefore only use *religious denomination*. From a scarce literature on comparative analyses in Europe, Philipov and Berghammer's (2007) findings present a mixed picture according to different fertility intentions and preferences. Multi-denominational countries show contradictory evidence regarding preferences. In this analysis, however, our dependent variable is different; we focus on intentional outcomes.

4.4 Context, Data and Methods

4.4.1 The National Context: Trends in Fertility in the Netherlands, Switzerland, Hungary and Bulgaria

In preparing a European comparative study, we planned to include as many countries as possible, but only selected those where longitudinal data sets are available and where the data sets include questions on time-specific fertility intentions. We also wanted to have data sets from chronologically similar periods of time. Naturally, it was requisite that the questions could be harmonised. We briefly outline developments in fertility since 1990 in the selected countries below, and describe the situation in the last decade when the data used in our analysis was collected. Figs. 4.2 and 4.3 show trends in the mean age at childbirth and in the total fertility rate in the four countries included in the study between 1989 and 2008.

The Netherlands The level of fertility is quite high and stable in the European context, though mothers give birth to their first child at a late age (Fokema et al. 2008). The Netherlands is a case where recuperation took place quite early in comparison to other West European countries (Lesthaeghe 2001). During the period covered by our data collection (the period between 2004 and 2007), the mean age of mothers at first childbirth increased by 0.2 years. The total fertility rate is at a high

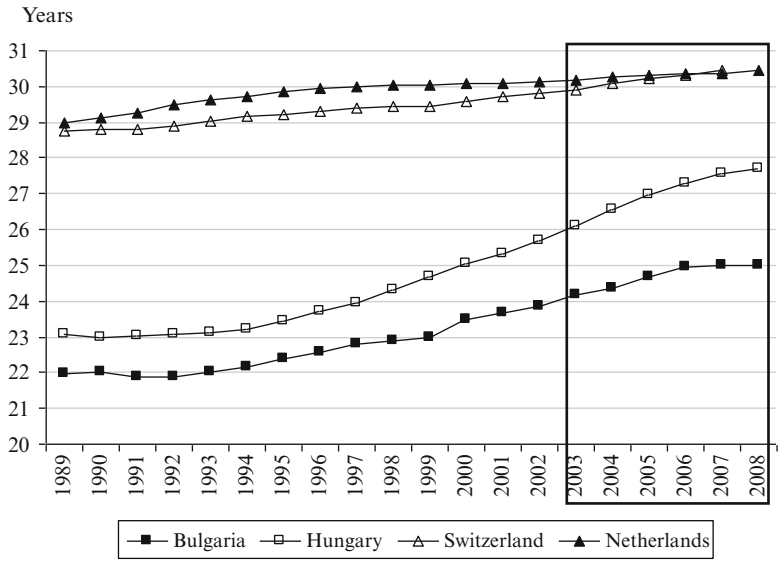

Fig. 4.2 Mean age of mothers for all births in Netherlands, Switzerland, Hungary and Bulgaria, 1989–2008

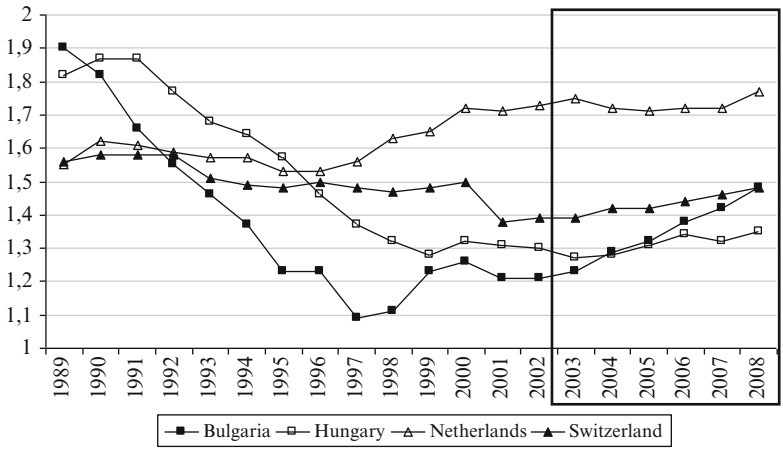

Fig. 4.3 Total fertility rate in the Netherlands, Switzerland Bulgaria and Hungary, 1989–2008

European level, above 1.7. All of this indicates that the Netherlands represents a stable fertility regime.

Switzerland Switzerland is characterised by low and very late fertility. Furthermore, the mean age of mothers at birth is increasing continuously. Around the beginning of the 1990s the mean age of mothers at childbirth was lower than in the Netherlands, but at the time of our inquiry (between 2004 and 2007) the mean age of mothers in

Switzerland had surpassed that of the Netherlands, increasing during this period by 0.5 years. The TFR was around 1.45 at the time of the data collection.

Hungary The Hungarian fertility transition started at the beginning of the 1990s. The level of fertility (TFR) dropped from 1.84 to 1.29 in 1999, and since that time has fluctuated around 1.3. The mean age of mothers at first birth has increased continuously since the second half of the 1990s (Spéder and Kamarás 2008). The fertility transition in Central Eastern Europe is taking place at a faster pace than in Western Europe. During the investigated period (2001 to 2004) the mean age of mothers at first birth increased from 25.3 to 26.3. Naturally, if postponement distortion in the calculation of the TFR was acknowledged then the adjusted fertility would be much higher than the actual one (Bongaarts and Feeney 1998).

Bulgaria Bulgarian fertility followed the pattern of the fertility transition seen in other former Communist countries. During the investigated period the transition process continued: the mean age at first birth increased by 0.8 years from 2002 to 2005. At the same time, Bulgarian fertility showed a very slight increase, having reached its nadir at the end of the 1990s (1997–1998) at a level slightly above 1.1. Between 2002 and 2005 it increased by 0.1. The societal transition process in Bulgaria lags somewhat behind that of other Central European countries, and the economic and social crisis was somewhat deeper (Koytcheva and Philipov 2008).

As this very brief description of the four countries demonstrates, individual and group behaviours are embedded in quite different fertility regime settings.

4.4.2 Data, Sample and Methods

We use four quite different though nationally representative large-scale panel surveys. The Hungarian and Dutch surveys resemble each other in that they focus on changes in demographic behaviour.[15] We use the first two waves of the Netherlands Kinship Panel Survey (Dykstra et al. 2007), and the Hungarian Turning Points of the Life Course Survey (Kapitány 2003). The time frame of the follow-up was 3 years in both cases. In the case of Switzerland, the Swiss Household Panel Survey's follow-up was organised annually; therefore we used the sixth and the ninth waves for our analysis (Voorpostel et al. 2009). In the Bulgarian Social Capital Survey more than 10,000 women and men aged 18–35 were interviewed between 2002 and 2005.[16] Selected features of the surveys are noted in the Appendix (Table 4.4). The first wave of the selected surveys was conducted between 2002 and 2004, and the second wave took place between 2005 and 2007. Although the four surveys' questionnaire designs are rather different, the included fertility intention questions are

[15] Both surveys are part of the Generations and Gender Programme (GGP) (Vikat et al. 2007).

[16] The Bulgarian survey was carried out as part of the project "The Impact of Social Capital and Coping Strategies on Reproductive and Marital Behavior", organised by the MPDIR Rostock and the Bulgarian Academy of Science (see Bühler and Philipov 2005).

comparable. All four surveys contain questions on time-related fertility intentions (though in somewhat different formats), and provide an accurate account of births between the waves.

Since we utilised four independent surveys, it is not surprising that we encountered difficulties harmonising them. However, we believe that we have constructed a dependent (intention–outcome) variable suitable for comparison, and a set of comparable independent variables covering the basic influencing factors of intention–behaviour realisation. Obviously, we have had to make some compromises; the 2-year time frame of the Swiss and Bulgarian surveys is the reason for having the 2-year time frame for the intention question in this comparative study. Furthermore, women who were pregnant at the time of the interviews were handled differently in all three countries.[17] Our solution, adding second-wave pregnant women to intentional parents, appears to be a satisfactory solution.

We selected a subsample of the surveys for our analysis. Only those persons who intended to have a(nother) child within 2 years and who were subsequently interviewed were selected into the subsample. In short, we needed to fulfil two criteria: (1) whether a respondent intended to have a child, and (2) whether a child was born and if the intention subsequently changed or was maintained.

We applied multinominal logistic regression techniques in our analysis. This method was used by Heaton et al. (1999) and Berrington (2004) to study the relationship between fertility intentions and the behaviour of childless people. We also utilised this approach in our Hungarian study (Spéder and Kapitány 2009). Since our research question aims to explore and understand failures to realise positive intentions, we used the group of intentional parents as the reference group.

The basic distribution of our dependent variable, the fertility intention–outcome variable, reveals huge differences between the countries (Table 4.2). The rate of successful realisation is quite high in the Netherlands: three out of four people realise their 2-year-intention within 3 years. The ratio of realisation only slightly surpasses the level of 50 % in Switzerland. In Hungary and Bulgaria, two fifths of time-related fertility intentions are realised; the ratio of those successfully realising their intentions therefore seems to be quite low in Hungary and Bulgaria. In this study, we focus on similarities and dissimilarities regarding determining factors.[18]

Table 4.2 The distribution of fertility intention and outcomes variable in four countries

	Countries			
Fertility outcomes	Netherlands	Switzerland	Hungary	Bulgaria
Intentional parents	75	55	40	38
Postponers	15	27	42	44
Abandoners	11	18	18	18

[17] The exact wordings of the questions are presented in the Appendix, Table 4.5.

[18] The Spéder and Kapitány (2014) study is devoted to describing and explaining country-specific differences in the rate of realisation.

There is no need to describe all of the independent variables in detail as their construction is self-evident.[19] We only need to point out that *age (number of years),* and the variable *educational attainment* (number of completed years of education) are continuous variables. *Parity* divides the people with intentions into three groups: the childless, those with one child, and those with two or more children. For the present study *partnership status* takes into consideration the presence and form – but not the length – of partnership: people are clustered into (1) living alone,[20] (2) cohabiting, and (3) married. Cases where respondents were in a partnership for the first wave and then subsequently separated afterwards are also considered in a separate dummy variable. The control variable, *employment status*, distinguishes between having a job or not at the first wave. For religious affiliation, we use Catholics (except in Bulgaria where we use Orthodox) as the reference group, and we also include Calvinists, other denominations and non-religious people.[21] All but one variable was measured at the time of the first interview, when stated intention was measured. One kind of partnership change, namely dissolution was measured between the first and subsequent wave. Since the small sample size does not allow us to separately perform the analyses by gender, it serves as a control variable in our models.

4.5 Results

Results of the multinomial logistic regression analyses are presented in Table 4.3. Age is a clear-cut predictor of the investigated relationships between intention and behavioural outcomes, since in seven out of the eight studied relations it has a significant effect (Table 4.3, first line). Those who fail to realise their intentions within 3 years – regardless of changes in their intentions – are older than those who succeed. In other words: the younger the respondent, the easier s/he can realise positive fertility intentions.[22] This result clearly supports the *biological clock* approach as assumed in Hypothesis 1a, since both postponers and abandoners are older than intentional parents. This unambiguous result, at least in the relationship of parents

[19] The descriptive statistics in the Appendix (Table 4.6) also serve to highlight the features of the variables included in the models.

[20] It should be noted that many people living alone have longstanding partnerships, but do not permanently cohabit.

[21] All four studied countries are religiously mixed, and differ in the ratio of the different denominations. In Hungary, Roman Catholics form the majority and Protestants (Calvinists and Lutherans) the minority. In Switzerland Protestants and Roman Catholics are equally represented. The Netherlands can be seen as a secular country, although Roman Catholics and Protestants are present. In Bulgaria, the majority of the population belongs to the Greek Catholic (orthodox) church.

[22] We experimented with additional non-linear and interaction effects with age as showed by Liefbroer 2009 and Iacovou and Tavares 2011, but were unable to find significant effects (see Kapitány and Spéder 2012).

Table 4.3 Multinomial regression estimates predicting patterns of realisation of time-dependent intentions (odds ratios predicting the risk of being intentional parent, postponer or abandoner)

	Postponers				Abandoners[a]			
	Netherlands	Switzerland	Hungary	Bulgaria	Netherlands	Switzerland	Hungary	Bulgaria
Age	0.99	1.09***	1.12***	1.04***	1.30***	1.08**	1.32***	1.17***
Female	1	1	1	1	1	1	1	1
Male	1.55	1.04	0.88	0.89	3.61***	0.79	0.49***	1.34**
Parity0	1	1	1	1	1	1	1	1
Parity1	0.34***	0.14***	0.65**	1.46***	1.61	0.24***	3.48***	5.68***
Parity2+	0.46	0.25***	0.38***	0.52**	2.84**	0.58	5.20***	15.93***
Married at wave 1	1	1	1	1	1	1	1	1
Cohab. at wave I	1.44	0.60	1.16	1.12	1.17	0.30**	0.81	0.49***
Alone at wave I	2.36	4.27***	4.20	6.85***	2.69*	6.99***	3.67***	3.02***
No lost partner	1	1	1	1	1	1	1	1
Lost partner	10.43***	3.77	4.15***	2.38***	9.46**	54.62***	6.23***	5.48***
Education	0.95	0.99	0.95*	1.04*	0.83**	0.96	0.85***	0.94***
No job	1	1	1	1	1	1	1	1
Job	0.64	0.83	1.16	0.94	1.39	1.71	1.15	1.05
Catholic[a]	1	1	1	1	1	1	1	1
Calvinist	3.54*	1.37	1.23		0.99	0.73	0.93	–
Other religion	5.76**	4.07***	0.88	0.94	0.66	0.86	0.44**	1.01
No religion	2.63*	1.37	1.47	1.01	0.99	1.93	1.04	0.41***
Chi-Square	119	122	432	745				
DF	24	24	24	22				
Nagelkerke R^2	0.28	0.32	0.38	0.33				
n	458	408	1,069	2,196				

Note. The reference category "intentional parents" are those which successfully realised their 2 years intentions within 3 years
[a]In case of Bulgaria the reference category: 'Orthodox'
*<0,1; **<0.05; ***<0.01

versus postponers, rejects the *social age norm* approach (H1b), namely the idea that people approaching the deadline of childbearing are more likely to realise than to postpone their intentions. The contrary is actually the case: postponers are older than intentional parents. Only in the Netherlands do we not find age-differences between postponers and intentional parents.

Abandoners are clearly older than postponers in Hungary and the Netherlands, and slightly so in Bulgaria. This result supports Hypothesis 1c, and fits the argument that abandonment in the three mentioned countries is a result of perpetual postponement. Nevertheless, the Swiss case does not support this concept.

The effect of the number of children (*parity*) appears to be significant in most cases (14 out of 16 coefficients), and the remaining two coefficients correspond with the direction of the others, although the effect is statistically non-significant. Our expectations seem to be confirmed regarding most of the categories, though there are some exceptions. When looking at the relationship between intentional parents and postponers, we see very clearly that childless people (parity 0) have a higher risk of becoming postponers than successfully realising their intentions: Hypothesis 2a is supported. It confirms our expectation that there are more conflicting and competing life goals that can prevent realisation if people do not have children (Barber 2001; Rindfuss, et al. 1988), and/or in case of first and higher parities people are more informed and experienced about childbearing than childless people and therefore their intentions are stronger (Davidson and Jaccard 1979). Nonetheless, one exception seems to exist, but only in relation to parity 0 and parity 1: in Bulgaria people with one child are more likely to become postponers than childless people. However, comparing childless respondents and respondents with two or more children, the same correlation can also be found in Bulgaria: childless people are more likely to postpone than people with two or more children. The Bulgarian case needs further investigation, but one explanation seems plausible: the higher likelihood of realising fertility intentions by childless respondents can also be a sign of increasing prevalence of single-child families. This could be a sign of the diffusion of the single-child family model found in Russia and Ukraine (Avdeev 2003; Perelli-Harris 2005; Philipov 2009).

Analysing our second parity-specific hypothesis and studying whether people with one child (parity 1) have the highest risk of becoming intentional parents (H2b), we get controversial results. Only the relationship between intentional parents and abandoners seems to support this assumption, since those with higher (2+) parity are more likely to abandon their short-term fertility intentions and reduce their family size intentions. By contrast, Hypothesis 2b is not supported. Therefore, the idea of having two children as the most successful project is only partially supported by our analysis focusing on how short-term intentions are realised.

If we compare abandonment with successful realisation, it seems that people in Bulgaria, Hungary and in the Netherlands with one (or more) child(ren) are significantly more likely to abandon their intentions than childless people. This is in accordance with our third parity-specific hypothesis (H2c). Conversely, in Switzerland the relationship is reversed: childless people (parity0) are more likely to abandon

their intentions than people with children (parity1 and parity2+).[23] This result calls for attention to be paid to differences between fertility regimes in Europe. In two eastern and one western European countries people are more likely to abandon their childbearing intentions if they have more children, or at least one. In this respect Swiss behaviour seems to be an exception: the higher risk of being an abandoner among the childless is an indicator of the wide diffusion of childlessness in Switzerland (Dorbritz and Ruckdeschel 2005). However, it is worth noting that childlessness may to some extent also be a result of non-successful intention realisation in Switzerland.

Partnership status exhibits a clear influence, when comparing single non-cohabitants with married respondents and cohabitors. Furthermore, partnership in all four countries is a prerequisite for the realisation of fertility intentions (Schoen et al. 1999; Philipov 2009). The results clearly support Hypothesis 3a. However, we cannot find clear differences between realisation of fertility intentions and the type of partnership.[24]

Changes in partnership status clearly influence the realisation process: as expected, separation hinders the realisation of fertility intentions (H3c). In three out of the four studied countries people who dissolve their partnership abandon their short-term fertility intentions. The chances of becoming an abandoner are particularly high in Switzerland. The exception is the Netherlands, where there is no difference between postponers and abandoners. We should also highlight that this result clearly supports the assumption that life-course events strongly influence the relationship between intention and behaviour (Ajzen 1988; Liefbroer 2009). However, they may not weaken the relation, but probably force changes in intentions, at least in the short-term. This could again have long-term consequences, namely a downsizing of long-term family size intentions (Liefbroer 2009).

The additional background variables have significant effects in all of the countries studied. However, the directions of the effects are often contradictory and vary from country to country (Table 4.3). This is perhaps due to the fact that social forces play different roles in different country-specific cultural contexts and/or institutional settings, and therefore have varying impacts on intention realisation.

For example, in three out of the four countries *education* clearly plays a role in abandonment in relation to intentional parents. With increasing levels of education the likelihood of being an abandoner decreases. But coefficients comparing "successful realiser" and "postponer" show contradictory results. In the two Western countries there is no educational difference between intentional parents and postponers. In the two Eastern countries the results are the opposite. In Bulgaria, the respondents with higher levels of education are inclined to postpone. In Hungary, by

[23] Although the odds are clearly lower for parity2+ than for parity0, the difference is not statistically significant.

[24] Here it should be noted that for Hungary, where it was possible to run separate models for women and men, we find significant differences among women. Considering negative intentions cohabitors had a higher chance of realising their negative fertility intentions than married people (Spéder and Kapitány 2009).

contrast, individuals with a higher level of education are more inclined to realise their short-term intentions. The rather generous family support in Hungary (6 months full pay followed by 18 months at 75 % of pay) may counterbalance the opportunity costs resulting from staying at home after birth. The prevalence of this 24 month-long parental leave could explain why higher educated, formerly employed women are more likely to realise fertility intentions in Hungary. In contrast, in Bulgaria opportunity costs might make respondents postpone realisation of their short-term fertility intentions.

The same conclusion can be drawn when considering the impact of *religious denominations* as an example of ideational indicators on intention realisation. The effects of different denominations are selective and contradictory. In Hungary and the Netherlands, non-religious individuals seem to be more likely to postpone than to realise their intentions. In the Netherlands, Roman Catholics have a significantly higher chance than those of other denominations of realising their fertility intentions. In Switzerland there are no differences between Roman Catholics, Protestants, and non-religious people: only those belonging to "other religion" have a higher likelihood of postponing their intentions. In Bulgaria, surprisingly, non-religious people have a lower likelihood of becoming abandoners than intentional parents. These results demonstrate the wisdom of including ideational factors, but simultaneously indicate the need for further research on religion, religious denominations in particular and other ideational factors in general.

Employment status may influence intention realisation, and according to the literature (Kreyenfeld 2001), gender differences related to the labour market are very large. However, as mentioned earlier, separate models by gender could not be estimated due to small sample sizes. In addition, our "employment" variable is quite undifferentiated. The "no-job" category includes many different statuses, especially for women; these include: unemployed people, those who are on parental leave, housewives, students, other inactive dependents, etc. To examine gendered influences of employment status on realisation more accurately, more refined employment status categories are needed.

4.6 Concluding Remarks

In this chapter, we wanted to obtain insights into fertility decision making through closer consideration of the intention–behaviour link. Both theoretical considerations and empirical analysis served to help us reach our goal.

The empirical research compared factors influencing the likelihood of whether short-term fertility intentions are realised. We focused on the question of whether the same factors (the same forces) led to non-realisation (postponement or abandonment) of fertility intentions. Since we used data which were obtained from research focused on different research questions, after the harmonisation was completed fewer comparable variables (factors) could be utilised than we originally wanted based on the theoretical approaches. However, based on this limited number of variables, we are able to

identify very strong and mostly similar kinds of influences of social-demographic variables such as age, parity and partnership in all of the countries studied. This shows that different social and demographic positions/statuses, such as young age, having one child, and having a stable partnership, establish a more positive context for intention realisation. On the other hand, other demographic positions such as older ages, being childless or having two or more children, hinder the realisation of intended behaviour.

At the same time, we also find interesting and important country-specific differences. The multivariate analyses revealed that intention–behaviour relations differ by parity. Unintended childlessness is demonstrated in Switzerland, and the unintended increase of one-child families is identified in Bulgaria.

The clear influence of separation draws our attention to the need for deeper and more extensive analysis of intention and realisation within the life course of individuals (Iacovou and Tavares 2011; Liefbroer 2009; Morgan and Rackin 2010). Some life-course events may turn out to be as significant as partnership break-up in trying to understand failure or success in realising intentions.

Only a limited number of structural (socio-economic) and ideational factors could be examined. Consequently, it is not surprising that we can only demonstrate slight influences of these kinds of factors. However, we do demonstrate that both structural and ideational factors influence the realisation of fertility intentions in case of one country (Spéder and Kapitány 2009).

In our research we also aimed to discuss some TPB related issues, since the TPB suggests that fertility intention is the key element in fertility decision making. We conclude that several explanations of the actual mismatch between intention and behaviour could be accommodated into the TPB approach, however some challenges do remain.

In line with numerous studies, we showed in detail that certain social categories and demographic positions are more likely to realise their intentions than others. It is, however, important to note that many of these factors seem to be universal, that is, they operate in the same way in every country. These universal mechanisms can operate in various manners. First, change can occur because social situations and demographic positions (background factors) influence the antecedents (namely attitudes, subjective norms and perceived behavioural control) of intentions, in turn resulting in a revision of intentions. Second, it is also possible that the described background factors assist or hinder the realisation of planned behaviour through actual behavioural control barriers. These first two pathways of influence fit the TPB framework well. However, effect mechanisms could also work independently of or parallel to mechanisms emphasised by TPB. Again, two such pathways could be suggested. One of them is also universal: social categories may differ in resources and behaviour options available to them, and therefore differ in the extent to which they are able to realise their intentions as well. In addition, social categories may differ in the strength of their intentions, which again may lead to varying behavioural results. Lastly, the existence of the different rates of success and failure of intention realisation indicate that macro-contextual effects particularly influence realisation via misperception or non-perception of the strength of enabling or

constraining contextual factors (Spéder and Kapitány 2014). Nevertheless, the macro-context does not – or barely influences – the factors which shape intention–behaviour relationship in certain countries. Regarding this latter point, we are only able to demonstrate some very specific country-specific phenomena (like childlessness in Switzerland and single child in Bulgaria).

Our analysis is limited by the post-harmonised data sets that we utilised in our inquiry. Further comparative analyses of pre-harmonised databases would allow refinement of our results. It could answer our questions and might result in formulating further ones. Finally, future analyses will need to further specify the relationship between fertility intentions and childbearing behaviour.

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Appendix

Table 4.4 The main characteristics of the four surveys used

	Netherlands	Switzerland	Hungary	Bulgaria
Survey name	Netherlands Kinship Panel Survey (Netherlands GGS survey)	Schweitzer Household-Panel (SHPSI.-SHPSII.)	Turning Points of the Life Course (Hungarian GGS survey)	Social Capital Survey
Fieldwork 1st wave	2003/4	2004	2001/2	2002
Fieldwork 2nd wave	2006/7)	2007	2004/5	2005
Non-adjusted panel attrition (inclusive deaths, emigration etc.) between the two waves	N/A	N/A	17 %	25 %
Longitudinal sample size (Unweighted N)	6,326	N/A	13,540	7,481
Number of respondents intending to have a(nother) child within 2 years (subsample, unweighted N)	458	385	1,056	2,196
Weighting variables	Bweight0	WP07L1S	S2_suly	No
Weighted subsample	493	409	1,069	No
Description of data, methods, field-work	Dykstra et al. (2007)	Voorpostel et al. (2009)	Kapitány (2003) (in Hungarian)	Bühler and Philipov (2005)
Survey home page	www.nkps.nl	www.swisspanel.ch	www.demografia.hu	–

Table 4.5 The formulation of the fertility intention questions in the different questionnaire programmes

NKPS (Netherlands)	SHPS (Switzerland)	HGGS (Hungary)	SCS (Bulgaria)
Q. *Do you think you'll have (more) children in the future?*	Q. *Do you intend to have a child in the next 24 months?*	Q. *Would like to have additional child(ren)?*	Q. *Do you intend to have (another) child during the next 2 years?*
A. Yes/no/don't know	A. Yes/no	A. Yes/pregnant-partner pregnant/no, does not want/cannot have more children/don't know	A. Definitely yes/Probably yes/Probably No/definitely no
If yes		If yes	
Q. *Within how many years' time would you like to have your (first/next) child?*	Interviewer: Pregnant women: not counting the child you are currently pregnant with = another child in addition to the one you are expecting?	Q. *At what age would you like to have your next child?*	Interviewer: if the respondent/partner is pregnant add: besides the one you are expecting?
Interviewer: If pregnant/partner pregnant = 0			

Table 4.6 Mean and standard deviation of independent variables

	Netherlands		Switzerland		Hungary		Bulgaria	
	M	SD	M	SD	M	SD	M	SD
Age	31.4	4.6	33.0	5.3	29.2	4.9	27.4	5.6
Sex (0-male; 1 female)	0.67	0.47	0.48	0.50	0.49	0.5	0.48	0.5
Parity1	0.41	0.49	0.37	0.48	0.30	0.46	0.33	0.47
Parity2+	0.14	0.34	0.18	0.39	0.17	0.38	0.25	0.43
Cohabiting at w1	0.31	0.46	0.19	0.39	0.19	0.40	0.13	0.34
Alone at w1	0.07	0.26	0.13	0.34	0.27	0.44	0.26	0.48
Separated from partner	0.02	0.14	0.02	0.15	0.04	0.19	0.03	0.17
Job	0.85	0.36	0.85	0.35	0.76	0.43	0.79	0.41
Education (continuous. classes)	14.6	2.1	13.2	2.7	11.7	2.5	11.6	2.85
Calvinist	0.18	0.38	0.34	0.47	0.15	0.35	–	–
Other religious denomination	0.06	0.23	0.08	0.27	0.11	0.31	0.14	0.35
Non-religious	0.57	0.50	0.13	0.34	0.21	0.40	0.09	0.28

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Chapter 5
Uncertain, Changing and Situated Fertility Intentions

A Qualitative Analysis

Laura Bernardi, Monika Mynarska, and Clémentine Rossier

5.1 Introduction

Fertility intentions and childbearing decision-making play a dominant role in models of fertility behaviour. Intentions are conceptualised as antecedents of behaviour and therefore seen as important mediators. The intentionality of a specific pregnancy may be measured before (prospective measure) or after the pregnancy (retrospective measure). Survey questions asking whether or not a pregnancy was planned are a typical example of the latter. In the past 15 years, such retrospective measures have been criticised. New measures have been tested and progress has been made in the field (Barrett and Wellings 2000; Luker 1996, 1999; Santelli et al. 2003, 2009; Speizer et al. 2004). While the questions used are very similar, no such progress has been registered in prospective measures of pregnancy intentions.

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This chapter examines multiple dimensions of fertility intentions in order to facilitate a critical reading of current indicators of the decision-making processes that lead to childbearing and of prospective measures of fertility intentions. Using a qualitative approach, we pay attention to the complexity of the process through which individuals make (or fail to make) plans regarding their reproductive future. The data are a series of comparable in-depth interviews conducted in a number of European countries with varying fertility levels and with different normative and institutional contexts.

We reconstruct the meaning that respondents attribute to their fertility intentions at the moment they voice them in order to advance the interpretation of answers to standardised survey questions. We then study the way in which individuals vary in the tenacity with which they hold on to their intentions (intentions' stability over time) and how these variations are related to the type of intentions. Finally, we examine how several aspects of the larger social context (family policy, dominant norms regulating the gender division of tasks and the timing of children) shape fertility intentions.

5.2 The Complexity of Childbearing Intentions

Sociological and anthropological studies have been especially useful in tracking ambivalence or uncertainty in childbearing intentions. They tend to deconstruct the ideology of 'planning' that is omnipresent in western thinking: individuals have to act (and try to act) reasonably by taking important decisions after having weighed the pros and cons. As qualitative work on these topics shows, the advantages and risks are often very mixed so that decisions are often made in uncertain contexts. In these cases, individuals' discourses and behaviours are contradictory (e.g., taking hormonal contraception but frequently forgetting the pill, or not using contraception, getting pregnant and then terminating the pregnancy).

The inadequacy of measures of intended and unintended pregnancies is a consequence of survey results' failure to support over-simplified rational models of reproductive decision-making. Trussell et al. (1999) found that a large proportion of women who became pregnant following a failure of their contraceptive method declared that they were happy about the pregnancy and rated their pregnancy as 'intended' (see also Barrett and Wellings 2000). Similarly, in a survey of 311 women taking a pregnancy test at a health facility, who declared not to want a(nother) child in the near future, 46 % were found to use contraceptives inconsistently or not at all (Sable and Libbus 2000). Faced with these repeated inconsistencies, researchers have asked whether the questions "Did you want a(nother) child at the time you got pregnant?" or "Do you want a(nother) child?" were too simple to capture the multidimensionality of the wish for a child (Miller et al. 1999). It became apparent that the concept of 'fertility intention' in population studies required more careful consideration.

5.2.1 Defining Fertility Intentions

Among the available theoretical approaches to intentions, the Theory of Planned Behavior (TPB) is particularly interesting for demographers (Ajzen 1988, 1991; Fishbein and Ajzen 2010) since it goes beyond a simple concept of rationality such as weighing pros and cons. The theory is presented in detail in Chaps. 1 and 3 of this volume. We simply outline the features that are important for our study. The TPB is built around a concept of intention that indicates "how hard people are willing to try, how much of an effort they are planning to exert in order to perform the behavior" (Ajzen 1991, p. 181). Individuals' intentions are shaped by three factors: their perceived ability to perform the behaviour (perceived behavioural control), their evaluation of the gains and appropriateness of the behaviour (attitude towards the behaviour) and their perception that significant others want them to behave that way (subjective norm).

The core assumption of the TPB is that "barring unforeseen events, people are expected to act in accordance with their intentions" (Ajzen 1985, p. 12). The stronger the intention, the higher the likelihood it will be transformed into action. The strength of intention is usually measured by the subjectively defined likelihood of exhibiting a given behaviour (Ajzen 1988; Ajzen and Fishbein 1980) or by the level of certainty of the intention, a method more commonly used in demographic surveys (Morgan 1982; Thomson and Brandreth 1995; Vikat et al. 2007).

In the TPB, intention captures motivational aspects and denotes a behavioural goal. Differently to other theoretical approaches such as Warren Miller's (Miller 1994, 1995, 2011), the TPB does not distinguish between desires and intentions. In Miller's model, desire precedes intention. It represents what a person wishes (wants) to do, while intentions represent what a person actually plans to do, given his or her actual resources and possibilities. In other words, intentions "are desires constrained by reality" (Miller 1994, p. 228).

The *desire for a child* concept is useful when we view the formation of a childbearing intention as a multistage and multidimensional process. The literature on the status of a person's intention to be pregnant shows that at least two aspects should be considered when analysing fertility intentions: the goal towards which the intention is directed (to have a child) and the timeframe for implementing it (Speizer et al. 2004; Santelli et al. 2009). Hence, the strength of an intention can refer to the timeline (How hard are people willing to try to have a child in the next 3 years?). However, at a more basic level, it also depends on how much a behavioural goal is valued, how strongly it is desired. An emotional state of *wanting* a child is a prerequisite for developing a clear-cut intention to have a child within a given time span. Acknowledging this fact, some researchers go as far as seeing desires as the affective dimension of the intention (Stanford et al. 2000).

In our study, the distinction between desires and precise intentions to have a child within the next 3 years is pivotal. We will use *desire for a child* to denote an individual's positive or negative position towards having a child. The expression does not contain any reference to timing. This desire underpins the intention to have

a child, which is formulated in a given timeframe. To put it simply, two dimensions are important here: the desire for a child and the time span in which individuals intend to fulfil this desire. We argue that both aspects have to be captured if we want to measure childbearing intentions more accurately. Moreover, it is necessary to account for differences in the strength or certainty of desires and intentions.

In Sect. 5.4, we propose a typology of future fertility intentions based on empirical data from semi-structured interviews with women and men of reproductive age in Bulgaria, France, Germany, Hungary, Italy and Poland. Existing typologies are constructed for fertility intentions as measured at the time of pregnancy. We propose to extend them to prospective fertility intentions measured at the time of the survey. The typology comprises two dimensions, namely the individual's intention to have a child within a given time span (3 years) as well as the desire to have a child that underpins this intention. Our data show that this two-dimensional perspective accounts for some of the observed diversity of intentions but does not capture the complete picture. In addition to the extreme categories (the strong, definite intention to have a child within a short time frame versus the strong, definite intention to exclude childbearing throughout a long period of time) we found several intermediate fertility intentions, which are not only characterised by different levels of uncertainty – as the theory would suggest – but also by different sources of uncertainty. While it may not be necessary to introduce the specific source of uncertainty in each and every analysis of fertility intentions, we show that the predictive value of intentions on fertility outcomes is contingent on the source of uncertainty.

5.2.2 Fertility Intentions as Predictors of Behaviour

Originally questions about fertility intentions were predominantly designed to gather information for fertility projections (Philipov and Bernardi 2012) and, in any case, not "to be used at an individual level" (Santelli et al. 2003). A number of quantitative studies (Freedman and Hermalin 1975; Hermalin et al. 1979; Foreit and Suh 1980; De Silva 1992; Bankole and Westoff 1998) as well as the works of the REPRO project show that even though fertility intentions are strongly correlated with fertility behaviour at the aggregate level, this relation is far from systematic at the individual level.

The relatively low predictive power of fertility intentions is largely due to the way its measurement is designed, and specifically to the length of time between measuring the fertility intention and measuring its realisation (generally 2 or 3 years). If the time lag between the intention and the behaviour is too large, there is a risk that various changes in the life course affect this relationship (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975). Changed intentions may explain the discrepancies measured at the individual level.

Using a comparative content analysis approach to analyse the interviews that took place at three different points in time (longitudinal qualitative data) in Switzerland, we show in Sect. 5.5 that childbearing decisions are dynamic and that

changes occur both in terms of desiring a child and intended birth timing. Individuals integrate their past experiences and adapt childbearing to changed life circumstances such as events occurring in the couple's relationship or employment situation. In view of the relative behavioural predictive power of intentions, the REPRO project opted for the TPB to model fertility decisions at the individual level, thus making 'intentions' the key proximate factor of fertility behaviour (see also Schoen et al. 1999). Our findings suggest that to model childbearing-decision processes appropriately and to predict behaviour, it is advisable to frequently measure intentions.

5.2.3 Putting Fertility Decisions in Context

Issues related to childbearing are more contradictory and ambivalent in some societies than in others. For example, in countries where employment and housing are scarce and affordable child care is mostly unavailable, it will be more problematic for couples to decide to have a(nother) child. If having a (or one more) child would force the mother to leave the labour market, at least for some time, this choice may lastingly undermine the family's income-generating power. The same holds true if individuals' (and women's) identities are decisively determined by their job and affordable child care is unavailable. In such cases, individuals may try to escape from the conflict by *not* planning. In their article, Gribaldo et al. (2009) explain the widespread use of traditional and less secure contraceptive methods by Italian couples who state that they have no intention to have children soon. This apparently inconsistent behaviour is not so much the consequence of a traditional behaviour that rejects modern contraception. It is typical for relatively stable couples in their mid-thirties who feel that they have not yet satisfied all the socially required conditions for parenthood (stable income, appropriate housing, etc.). The authors show that these couples are burdened by a fundamental conflict between social norms, structural features and their own childbearing intentions. They would not like to be childless and, given their age, they cannot really delay childbearing for much longer. Yet they do not feel materially and/or emotionally ready for parenthood. Many couples who were interviewed during this study said: "It is never a good time to have a child". In order to remain reasonable (i.e., not inconsiderately wanting to give birth when the conditions have not been met), while at the same time fulfilling their desire to have children, married couples take a non-committed attitude towards fertility intentions ("Those things are better unplanned") and use traditional methods of contraception. They can then be taken by 'surprise' when a pregnancy occurs.

Qualitative studies also make explicit how individuals' background and their place in the social hierarchy affect their fertility intentions. For example, an Afro-American woman living in a poor US neighbourhood may have an unintended pregnancy simply because she does not have many avenues for self-realisation other than motherhood and despite the fact that she does not meet the socially prescribed conditions for having a child (e.g., a stable partner and a stable job). In Sect. 5.6 of this chapter, we present a set of analyses focusing on the normative dimensions of

fertility decisions and show how norms interact with the institutional and structural context to create the conditions in which couples take their (more or less ambivalent or changing) childbearing decisions. We ask why the wish not to have a child is widespread in some national contexts and not in others. We show how norms and practices regarding men's involvement in child care (which is related to fertility intentions) vary with the national family policy context. We also study situations, in which structural conditions have changed while norms have not yet been adjusted.

5.3 Data and Methods

The qualitative data used in this chapter were collected during a series of comparable in-depth interviews conducted with respondents in their twenties and early thirties. They had a moderate to high level of education and lived in cities in seven European countries: Bulgaria, France, Germany, Hungary, Italy, Poland and Switzerland. With the exception of France, these countries share below-replacement fertility, while the constraints to childbearing and the realisation of childbearing intentions vary from country to country.

In order to be able to do a qualitative analysis across contexts, we had to have a comparable sample from each country's dataset. Therefore, we limited the study to individuals around the average age of family formation in each country who had middle (or, in some countries, higher) education, because fertility decisions tend to be an issue in this age group. Drawing on the analytical principles of the 'grounded theory' approach (Glaser and Strauss 1967; Strauss 1987), we identified and grouped similar practices and representations in order to systematically contrast them. Comparative qualitative analysis allowed researchers to identify the factors that shape behaviours at the individual level (what distinguishes one individual from another individual) as well as the factors acting at the aggregate level (what distinguishes individuals in one context from individuals in another context).

5.4 A Typology of Fertility Intentions

We already stated that intentions are indicators for the effort people are willing to make to perform a behaviour. Once the behavioural goal has been defined, the difference between individuals is thus limited to the extent they are willing to try to achieve the goal.

The qualitative approach we used permits us to move beyond the quantitative differences and to identify distinctive types of fertility intentions. Our research shows a large variety of respondents' positions between the two extremes, i.e., having definitely positive and definitely negative childbearing intentions. These intermediate intentions differ in a qualitative manner and are difficult to rank according to their strength.

Table 5.1 Distribution of respondents by country and sex

Country	Women	Men	Total
Italy	87	10	97
Germany	53	39	92
Poland	24	21	45
France	15	12	27
Total	179	82	261

Table 5.2 Distribution of respondents by sex, parity, marital status and education

Variable	Categories	Number of respondents
Sex	Female	179
	Male	82
Parity	Childless	147
	With offspring	114
Marital status	Married	107
	Cohabiting	47
	In a stable relationship but living apart (LAT)	56
	No partner	47
	Divorced or information missing	4
Educational level	University degree (at least first-stage tertiary education)	107
	No university degree (max. post-secondary education)	154

We analysed a set of 261 semi-structured, face-to-face interviews conducted in four European countries between 2004 and 2007 (Table 5.1).[1] Our sample consisted of 97 interviews conducted in Cagliari and Naples (Italy), 92 in Rostock and Lübeck (Germany), 45 in Warsaw (Poland) and 27 in Poitiers (France). In all interviews, respondents answered numerous questions on childbearing experiences and expectations and provided rich narrative data on our topic of interest. They spoke about their fertility plans and the factors that influenced their reproductive decisions as well as the issue of childbearing timing (see, for instance, Mynarska 2009a, for details about the guidelines).

In most national samples, ages ranged between 20 and 35 (mean age 30.4 years for women and 30 for men). Only 32 respondents (in the Italian and German samples) were older than 35. Our respondents had various marital statuses, were childless or had children. Table 5.2 shows the basic sample characteristics. Due to differences in

[1] We would like to thank all researchers who contributed to the coding of the interviews in the original languages for their invaluable contribution: Laura Cavalli, Arianna Caporali, Sylvia Keim, Andreas Klärner, Anne Salles, Sara Brachet, Marie Thérèse Letablier, Elitsa Dimitrova, Atanas Atanasov and Judit Durst.

the educational levels in the analysed countries, we regrouped the respondents into two large educational groups. More details on the sample and on the coding procedures can be found in Bernardi and Mynarska (2010).

In line with the grounded theory approach, we explored the narrative material to detect all passages that dealt with topics of childbearing intentions, desires or plans and used bottom-up (open) coding to identify the different types of fertility intentions. We defined the behavioural goal in the same way it was phrased in the surveys, namely to have a child within 3 years of the interview date. At the same time, however, we focused on differences between the respondents with respect to how they expressed and explained their intentions.

We distinguished six categories of childbearing intentions. Table 5.3 presents their labels and definitions and also indicates how many respondents they comprise.

Table 5.3 Categories of fertility intentions

Category	Respondents	Description
Definitively yes (a child as a project)	29 childless 32 parents	Respondents express a clear and strong intention to become parents. They desire to have a child, the intention is a concrete project, the time frame is short or active attempts to become pregnant are already in place.
Contingent intention (a child – as soon as…)	36 childless 20 parents	Respondents mention a variety of reasons that interfere with their intention to now have an otherwise strongly desired child. These reasons are generally perceived to be external, not necessarily within the respondents' control.
Far intention (a child – for sure, but later)	45 childless 8 parents	Respondents desire to have a child, but perceive parenthood as something that does not belong to the near future. Their reasoning is less centred on obstacles and more on the perceived time lag, with desire remaining a priority. Intentions relate to a distant, often undefined future.
Indifferent intention (a child – maybe)	19 childless 21 parents	Respondents do not express a strong desire to have a child, but negative desires are absent from narrations and the possibility of having a child in the next 3 years is not ruled out. At times, they declare that they have never thought about having a(nother) child. They are also indifferent with respect to timing. They maintain an open and non-committed attitude towards the possibility of childbearing.
Ambivalent intention (a child – at times yes, at times no)	8 childless 3 parents	Respondents typically oscillate between the desire to have and not to have a child. They express contradictory intentions or are not able to formulate them at all. The time frame is not clear.
Definitively no (a child is excluded)	10 childless 30 parents	Respondents are adamant in reporting their intentions not to have any or any additional children. Even if they accept the possibility of changing their intention in the future, they perceive this as something very distant and rather unlikely.

The typology is structured along the two aforementioned dimensions of childbearing intentions: we take into account the individual's intention to have a child in a given time perspective (3 years) but also the wish to have a child that underpins this intention.

5.4.1 Certain Intentions: Definitively Yes, Definitively No

In the case of the two extreme categories, i.e., *definitively yes (a child as a project)* and *definitively no (a child is excluded)*, respondents' intentions are formulated clearly and with a high degree of certainty.

In the *definitively yes* category, the interviewees explicitly express their positive wish to have a child and are willing to take active steps to become parents within the next 2 to 3 years. Often, some attempts to get pregnant are already in place and the respondents openly admit that they are trying to have a child. They also recurrently stress their readiness to have a(nother) child: they refer to some subjectively important elements of behavioural control when they explain their reproductive intentions. Accepting the responsibility of childbearing might be related to some personal motives and emotional readiness, as shown in the following examples.

> Earlier, I never thought about children. But for three, four years, it has become clearer and for two years I have known for sure that we want to have children (…) Now, it is important for me to earn money and to take responsibility as a father. That's my perspective. We want to create a family and this is beautiful. (Germany, male, 34, cohabiting, childless)

> Another child? Yes, we are planning… No. We have been trying to have another one for two months. I'm happy, I feel fine, so it is the right moment. (Italy, female, 33, married, one child)

Moreover, the respondents mention various contextual aspects of behavioural control: completed education, housing, material situation, stable work, etc., as illustrated by the following example.

> We want it [to have a child] just now. We're planning, because I've just graduated from my school and so on. Because earlier, it would have been difficult to combine it with everything else. It was difficult financially, too. (Poland, female, 26, married, childless)

At the other end of the continuum of our typology, there is the *definitively no (a child is excluded)* category. Respondents included here are adamant in reporting their negative reproductive intentions. Generally, they lack the motivation to have a(nother) child. Even if they occasionally say their intentions might change in the future, they perceive this possibility as something very distant and unlikely. A typical example is taken from an interview with a German respondent who explained her childbearing intentions in the following way.

> I have a steady boyfriend and everything is nice and fine, but with children and family…? It is good the way it is now. We've been together for two years, but marriage and children? No! I think I would fall apart. I am still very keen on travelling and want to keep my

> independence, so that I could say: Oh, I like it here, I want to stay here. Or to establish myself in some other place. This is very difficult with children. Actually, it is not really feasible. (…) The way I feel, I would say: no children. Maybe this will change in five years' time, but at the moment I would say: no children, I cannot imagine having children. Not in my world! (Germany, female, 31, LAT, childless)

It is apparent from the above passage that some respondents have priorities other than childbearing. Competing life goals are important factors that shape fertility intentions (Barber 2001). Other childless interviewees in this category express similar opinions. They give priority to self-fulfilment at work, personal development or artistic expression. The parents in this category exclude having another child either because they have reached the desired number of children or because the number of children they have is optimal in their current life situation. The most distinctive feature of all respondents in this category is their satisfaction with their present lifestyle and their conviction that having a child (or another child) would impair it. They are happy to remain childless or to stop at the number of children they currently have and do not imagine that they will change this situation.

The categories *definitively yes* and *definitively no* form clear, opposite ends of the spectrum of childbearing intentions. If we asked the respondents in these two categories a standard survey question about whether they intended to have a child in the next 3 years, they would answer "certainly yes" and "certainly no" respectively. In our sample, 101 individuals stated firm intentions of this kind. The other 160 expressed some uncertainty about their fertility plans. These respondents are in the remaining four categories of intentions: *contingent intention (a child – as soon as…), far intention (a child – for sure, but later), indifferent intention (a child – maybe)* or *ambivalent intention (a child – at times yes, at times no).* They are described in more detail below.

5.4.2 Uncertain Intentions: Contingencies, Ambivalence and More

Importantly, the remaining four intermediate categories do not differ in the degree of uncertainty but in its sources, in the way in which the uncertainty is expressed and dealt with. In other words, the differences between the categories are not quantitative but qualitative in nature.

First of all, the respondents' uncertainty relates to both of the aforementioned dimensions of childbearing intentions. Some are uncertain about the *timing* of childbearing while others have doubts of a more fundamental nature: they are not sure whether they want to have a child at all. Secondly, the uncertainty has two different sources. For some, it is linked to several external components of behavioural control, i.e., to conditions such as employment, education, housing, lack of partner, etc. In other cases, the uncertainty is rooted in internal, emotional factors and is not only related to their attitudes or values but also to their maturity and emotional readiness.

External sources of uncertainty dominate in the narratives of the respondents in the *contingent intention (a child – as soon as…)* category. These interviewees would like to have a child as soon as possible, but identify various external obstacles that prevent them from pursuing this goal. For instance, the respondent might lack a partner or his/her relationship is not satisfactory. A typical case comes from the Italian sample: a 31-year-old single woman with an intense desire to become a parent (*"I was born wanting children"*) who has not yet met the right person. Her being single is the only obstacle between her desire to become a mother and actually having a child. During the interview, she said:

> When I joke, I say: Insemination, or the first man who passes by, because I have this huge desire. But I cannot only think about myself; I have to think about the child too, one day. It is already difficult enough to live in society, but if I make him start on the wrong foot… (Italy, female, 31, single, childless)

Other missing elements of behavioural control are linked to the labour market (e.g., the respondents are unemployed, their employment is not stable or they find it difficult to reconcile their job with childbearing) or to the respondents' material situation (e.g., insufficient housing or low income). Financial aspects are critical for some respondents, as the following statement of an unemployed male respondent shows.

> Finances, that's a problem. For a child, you need to have some savings, at least some money. Or, I don't know – if D. [wife] doesn't work [for some time] and raises a child, then I should have a job. At the moment, there's no such opportunity and this holds us back. This issue most of all: finances. (Poland, male, 30, married, childless)

The obstacles mentioned in the interviews are not necessarily within the respondents' control and it is not always possible to predict if and when they will be overcome. The interviewees are not able to forecast when they will have a job or when they will find the ideal partner. Mastering other challenges might be easier to foresee. For instance, if a respondent wants to have a child as soon as possible, but feels it would be too strenuous to become a parent while doing a full-time study course, the end of the course is predictable. In such a case, childbearing is conditional on an event the respondent expects to accomplish soon, but which he/she feels to have not yet fully mastered.

In this category, the crucial dimension characterising respondents' childbearing intentions is the perception of weak behavioural control. The interviewees feel they lack the resources to try to have the child they strongly want to have. They are certain about their motivation to have a child but uncertain about the time frame within which they can realise their intentions.

The internal sources of uncertainty are revealed most of all by the respondents who belong to the categories "*Indifferent intention (a child – maybe)*" and "*Am-bivalent intention (a child – at times yes, at times no)*." In these categories, inter-viewees' inability to formulate certain and clear childbearing intentions is of a dif-ferent nature and is related most strongly to their personal, internal motivation, desires, and values. Considerations of external factors are not completely missing from their narratives, but they are not decisive.

In the category *indifferent intention*, we find individuals who sometimes openly admit that they have never considered to become parents or to have another child. They are vague about their fertility intentions and unable to formulate them even when prompted by the interviewer. A typical example comes from the Polish sample. When asked about his childbearing intentions, the male respondent said:

> I don't see myself as a parent for now (…) As of today, I am very negative about it. I don't close this topic; as of today, no. I don't close this topic, but I am not able to say whether I'll grow into it in half a year, in a year or in ten years. Today, I simply say: no (…) I have always pushed thoughts about it away. Simply, for now, it is a taboo topic for me. (Poland, male, 25, married, childless)

In other cases the issue of childbearing was considered, but the inability to take a decision as to whether and when to have a child has remained. One German respondent describes this in the following way:

> Well, if it happens, it happens; this is not the question, I would not abort. But if you can plan it, you should not plan that the child comes when the future is uncertain, when both partners do not know exactly where to go. And today, well, my job is safe, this I know. But is it so safe that I can say, really safe? And as a woman, you are out of the job for some time; therefore… I think a good time would be when both can really imagine having a child. This could be, maybe, the end of this year or next year or in two or three years. I am very spontaneous regarding this; as I said, one cannot plan these things. (Germany, female, 29, cohabiting, childless)

When they speak about their doubts regarding their childbearing intentions, the respondents in this category do not consider external factors as crucial. The German woman cited above mentions job insecurity as a factor that plays a role in her lack of precise childbearing intention. Yet, she argues that the right moment for a child will simply come. Even though she wants to work for some time before she becomes a mother, she does not exclude taking this step earlier. This is typical for all respondents in this category. They say that they do not yet feel emotionally ready for children or express various fears related to parenthood (e.g., loss of personal freedom, a reduced standard of living or being a bad parent). They also frequently list other life goals (mainly related to personal development) that have priority over parenthood and make them uncertain about their childbearing intentions. Notably, respondents in this category do not intend to have a child soon, but at the same time do not completely rule out this possibility. Moreover, explicitly negative positions to having a child are generally absent in their narrations. The respondents might be vague about their motivation to have a child, but they do not want to remain childless. Instead, they maintain an open and non-committed attitude towards parenthood.

Internal sources of uncertainty also prevail in the category *ambivalent intention (a child – at times yes, at times no).* Interestingly, this category includes only women who typically vacillate between the desire to have and not to have a child. Consequently, they express contradictory intentions during the interview. In their narratives, the women document that external elements of behavioural control are not crucial in their decision-making processes. Indeed, they frequently do not mention them at all. The wavering is rather related to their more or less defined fears of

childrearing or perceived personal immaturity and the anticipated satisfaction and social approval of having a first or subsequent child. This type of ambivalence is apparent, for instance, in the interview with an Italian respondent.

> I don't know… the need to organise a full life… Everyday routine… from morning to night, everything is scheduled… I'd need to change my whole life… But sometimes the idea of becoming a mother excites me… Sometimes I say, why not? But then… oh my God, no…! (Italy, female, 34, LAT, childless)

Childless respondents included in this category see motherhood as a difficult, demanding, strenuous and excessively time-intensive task that limits their freedom and independence. By contrast, not having children means to be responsible only for themselves and being able to dedicate their time and energy to other valued activities: studying, pursuing a professional career, going out, travelling, having hobbies, etc. Interviewees in the *definitively no* category also considered competing life goals a sufficient justification for remaining childless. For the respondents in the *ambivalent intention* category, however, living a childless life is not an easy alternative. They fear loneliness and negative emotional and practical consequences of being childless. Moreover, at times they experience a strong normative pressure to become mothers, which prevents them from taking a final decision against parenthood. This internal struggle is clearly visible in the interview with a Polish respondent:

> I do (want to have a child), but honestly speaking, it's not a normal way of thinking, normal in the sense of how a woman thinks about a child. And I guess this 'not-being-normal' is connected to the fact that I don't think about a child because I want to have a child now, but I think about a child because (…) I think that there is a time when one should have children. If I'll want to have children after I'm 40 – it's going to be too late (…) And this is rather the reason why I think about children, not that I would like to have kids so much now and I have such a strong maternal instinct. I don't have a maternal instinct at all; moreover, when I see somebody else's children, they in fact irritate me. They are fun, but for an hour; later I go crazy and when I think I would need to take care of them the whole day, I'm devastated! And I try to cheer myself up by the fact that a pregnant woman develops her maternal instincts, because it's biology. But should I trust biology? I don't know. (…) I have always thought that I have plenty of time for these things. That I can develop, learn, meet people, work, I don't know. Everything except children. (Poland, female, 29, married, childless)

This respondent's fear of loneliness later in life and the normative pressure to have a child literally push her into motherhood. At the same time, however, she expresses negative attitudes towards children and gives priority to other things in life. A similar ambivalence can be found with women who are already mothers and now struggle with the two-child family norm and their lack of inner motivation to have another child. One woman reported that her heart says 'yes' at times and 'no' at others, because her strong desire for a second child conflicts with the negative feelings associated with a bad partnership and with the concern about a long birth interval between the two siblings.

In the category *far intention (a child – for sure, but later),* internal and external factors are mixed. Respondents in this category are certain about their intention to have a child *in the future*. They express a clear, positive desire for children but feel that this is not a decision they have to take at this very moment. The topic is not a

priority for them, they do not feel emotionally ready for parenthood and their behavioural control of various external conditions is generally very low. Respondents in this category are usually young and childless, have not yet left the parental home and are still in formal education without stable employment. A typical example of this category is a 27-year-old male from France who does not consider himself to be in a stage of life in which he can consider childbearing. He is single, a student and financially dependent on his parents. He wants to have children one day, but nothing is pushing him to start a family in this stage of his life:

> In an absolute sense, yes of course! I intend to start a family later. Yes. But it's not something I'm thinking about every morning (…) There is a whole sequence to be put into place… Right now, basic things, like the fact that I'm not earning a living at the moment; I don't think I can have a child yet. Besides, you have to find the right person. (France, male, 27, single, childless)

The best way to describe the perspective of respondents in this category would be to think of them as not even having entered the 'population at risk', i.e., those susceptible to deciding whether or not to have a child. None of them stated an intention to have a child within the next 3 years. Nevertheless, this group of respondents is distinctly different from those belonging to the *definitively no (child is excluded)* category. They frequently express extremely positive attitudes towards children and a very strong motivation to become parents in the future, while the respondents in the *definitively no* category are not child-oriented and allow the possibility of never having a (another) child. Moreover, some of the respondents in this category think of having a child in the next 3 to 5 years, which is at the limit of our predefined time frame. Consequently, we list *far intention (a child – for sure, but later)* among the uncertain categories: the respondents here are *almost* but not *completely* certain that they will not have a child in the next 3 years.

5.4.3 Desire and Timing

In this short overview of the different types of fertility intentions, we focused on two distinct sources of uncertainty: external conditions on the one hand, and emotional, internal conditions on the other. The two groups of conditions are by no means homogeneous. External factors listed in the interviews relate to several spheres of life (e.g., partnership, economic activity, education) over which the individual's degree of control varies. In some cases, it is possible to predict when the external obstacles that prevent a person from having children will be removed. In other cases, it is impossible to say whether they will ever be overcome. Similarly, uncertainty related to personal motives might be rooted in the respondent's indifference towards childbearing but also in conflicting attitudes towards having children. Competing life goals and normative pressure also play an important role here. Such a variety of sources for doubts and uncertainties in declaring a fertility intention cannot be dismissed or simplified.

Table 5.4 A typology of childbearing intentions: Desire to have a child and prospective time frames of intention

Desire to have a child		Envisioned time frame for having a child		
		Now	Near future (up to 3 years)	Distant future
Positive	Definitively yes	Yes	Yes	–
	Contingent	No	Depends on contingencies	Depends on contingencies
	Far	No	Probably no	Yes – but unable to say when
Mixed	Indifferent (Vague desires, no negative desires)	No	Unable to say – open, uncommitted	Unable to say – open, uncommitted
	Ambivalent (Negative and positive desires)	No	Unable to say – wavering	Unable to say – wavering
Negative	Definitively no	No	No	Maybe, but not necessarily

Intentions to have a child are formulated in a given time frame and are built on the wish to have a child, but it is apparent that even though these two dimensions are central to people's fertility intentions, they do not allow us to capture the complete picture. We should not only consider that uncertainties may be related to desire or timing, but also take into account that they might depend on factors of a different nature. Table 5.4 shows the relationship between childbearing desires and the envisioned probability of having a child in different time frames or in different categories of intention.

For individuals with contingent, indifferent and ambivalent intentions, it is very difficult, if not impossible, to establish a time horizon for their realisation. This indicates that it might be insufficient to measure childbearing intentions with questions that only consider the behavioural goal (having a child in the next 3 years) and the strength of the respondent's motivation. When measuring intentions, the presence of different time frames and various sources of uncertainty in childbearing intentions are crucial elements to be considered.

5.5 Changing Fertility Intentions over Time[2]

Intentions are not written in stone and may change over time even though behavioural intentions refer to a relatively short period and should thus take into account the conditions for their realisation. Yet, in the case of childbearing intentions,

[2] This section is based on an analysis done in co-operation with Vincent Léger who coded the interview data of *Becoming Parents* to identify intention dynamics over time.

individuals are not always in the position to judge such conditions accurately. Situations in which intentions – sincerely expressed at a given point in time – have to be modified a few months later are not rare and must be studied. In particular, we need to understand which factors are decisive for the stability or instability of our respondents' childbearing intentions. Do they depend on the instability of the conditions themselves or on the instability of the childbearing desire underlying the intentions? Longitudinal qualitative data on fertility intentions are required in order to be able to draw conclusions.

The Swiss study *Becoming Parents* is a longitudinal mixed-method study. It includes a questionnaire-based survey and a set of narrative interviews with couples expecting their first child and living in the French-speaking part of Switzerland. In principle, each couple was supposed to be interviewed three times: during the fourth month of pregnancy (first wave); during the first 5 months after birth, while the women were still on maternity leave (second wave) and when the child was about one year old (third wave). The interviews were made between December 2005 and March 2009. The couples were selected on the basis of a purposive sample from a quantitative survey in order to ensure a variety of situations in terms of couples' work arrangements, domestic schedules, cultural and economic resources and rural or urban context of residence. Narratives were collected in face-to-face interviews and focused on the couples' changing organisation around the transition to parenthood and the principles guiding it. The intention to have a second child was also included in the questionnaire and the narratives. The survey did not contain questions on intentions to have a second child within a given period of time. In the open-ended interviews, the time frame could be coded ex-post when it emerged from the narratives. Because of attrition[3] and missing data on the intention for a second child, only 15 individual interviews (seven couples and one individual) contain sufficient argumentation to permit a sound classification of intentions into one or the other category (see Sect. 5.4) and to follow the dynamics of the intention. Our analysis of the intention dynamics is based on these 15 interviews. Here, we focus on the six couples (12 interviews) whose intentions changed from one wave to the other and on the reasons for these changes. In the other two cases, in fact, the consistently positive intention to have a second child (expressed during the first two waves) was realised: the respondents were expecting a child by the time of the third wave of interviews. We also left out the interview in which the partner did not speak about fertility intentions. Given the small sample size, our conclusions in this section should be seen as suggestions of intention dynamics and mechanisms that change people's intentions.

[3] The initial number of couples interviewed was 31, hence there were 62 interviewees. In the second wave, only 40 individuals were re-interviewed. In the third wave, efforts were made to recuperate individuals who had not been interviewed in the second wave, and in the end, the total number of third-wave participants was 42. A total of 52 individuals participated in the panel (irrespective of wave) at least twice.

5.5.1 From a Conditional to a Certain Intention to Have a Child and Vice Versa

When recording childbearing intentions for the first time, we allocated three couples to the categories *contingent intention (a child – as soon as…)* or *far intention (a child – for sure, but later).* In the subsequent wave, they were placed into the *definitively yes (a child as a project)* category. All of them had attached a condition to the realisation of their intentions; namely an event that might occur or the passage of time. The reasons were mostly alternative projects that took priority over bringing a second child into the family. In one couple from this group, the woman had originally planned to have her second child very soon after her first child. She shifted to a conditional intention, abandoning her family enlargement priorities in favour of achieving educational and employment goals first. By the time of the third wave, she had fully adopted these goals as her priorities.

What explains this change of mind? We should remember that the intentions were expressed with reference to a 2-year time frame and the second interview was done after one year. In one case, the woman's employment situation changed as expected, which offered the couple the condition it required for having a second child. The woman who shifted from *definitively yes (a child as a project)* to a *contingent intention (a child – as soon as…)* had delayed her own childbearing project to adjust to her partner's priorities. This, in turn, had encouraged her to pursue a new educational goal. Coupled with having a young child to take care of, this explains her shift towards a conditional intention. In wave one, her intention and desire were confounded in the excitement about the first pregnancy and she unrealistically brushed away the constraints the couple might have to face with an additional child. After the birth of her first child, she became fully aware of them. The first child's needs and the parents' efforts to satisfy them made her rethink her project.

With sufficient objective information on employment and education changes between the waves, these two cases were rather predictable. However, for two other couples, modified intentions could not be reduced to life-course changes quite as easily. For them, the desire to have a second child was equally strong throughout all the interviews. Yet, the timing they had considered important for making their intention conditional lost meaning between the interviews. In the first wave, one couple had expressed that waiting 3 or 4 years for the next pregnancy would ensure a 'good' birth interval, help the first child to profit in the best possible way and "let him grow first". Both partners had defended the planned timing as optimal. One year later, the same man and woman justified the arrival of their second child with an overwhelming desire that had rendered their previous planning irrelevant.

In the third case in this group, the crucial element for the couple was the incongruity between the partners' desire to have children. On the one hand, the woman's statement, in the first wave, that she was not yet ready for an additional child conflicted with her strong desire to have a child which was evident throughout the interview. She did not mention any real (economic, physical, emotional) reasons for postponement. On the other hand, her husband pointed out that their housing was insufficient to

welcome another child and considered their general material situation sub-optimal for enlarging the family. We think that the woman's declared intention implicitly integrated her husband's rationales. In the second wave, he seemed to have abandoned his material concerns although nothing had actually changed in their lives and both partners expressed the definite intention to have a second child in the interviews.

The stated conditioning factors are not always the true reason for shifting from conditional to certain intention. In some cases, the desire to have a second child becomes stronger and priorities shift towards welcoming the baby. This is particularly true when the declared condition is the couple's financial situation. It seems that this is used as a straw man argument to justify uncertainty at other levels. In the case examined earlier, the opposite shift – from certain to conditional intention – was made by a young woman whose education and employment situation had become clearer over time. As a consequence, a number of conditions had become more relevant (time for the couple, time for herself, employment satisfaction, material well-being) than having a second child.

5.5.2 From Uncertain to Certain Intentions

At least one partner of each of three couples expressed uncertainty with regard to having a second child as well as a corresponding, undefined desire for another child. Their uncertainty dissolved in the subsequent waves of interviews. In one case, it became a definitive no. In the other two cases the couple declared that having a child was their 'project'.

The first couple unanimously described the wish for parenthood as something that had been clear since their childhood. It was "a desire which has always been there" and was felt to give meaning to their lives as adults. The arrival of the first child seemed to have satisfied their quest for meaning; while the second child is perceived as a nice possibility, it is not really seen as necessary. A critical event was decisive for their experience of parenthood: before the current pregnancy, they had lost twins at an early stage of pregnancy. They then seemed to focus all their energy on the survival of their first child and did not feel ready to make bold emotional plans beyond. They were content with a 'maybe' when talking about a second child. In the following wave, quite surprisingly, they mentioned that they had initially wanted to have a second child soon after the first. They had not mentioned this in the first interview. Perhaps it was a rationalisation *ex post*, when they were relatively determined not to have the second child. Arguments for deciding against family enlargement were their economic situation, age (around 40) and the fact that the first child was already relatively 'grown-up'. Except for the last, none of these conditions could have been clearly foreseen in the first wave and integrated into a negative intention. Our explanation is that at that moment, and because of the dramatic event preceding the pregnancy, the couple was simply not able to plan further than the current child project.

In the second couple, only the man shifted from a relatively undefined idea about having more than one child to a definite project in the second wave. His wife, who

had been pregnant for 2 months during the third wave, had driven this shift. Her intention had been clear from the first wave onwards. She used two basic arguments to put an end to his uncertainty: her advancing age (38) and avoiding an only-child situation. She organised her professional life in such a way as to make it possible for them to deal with two babies and minimise her husband's reasons to continue postponing the pregnancy. She said: "This is why we have the second child relatively close to the first. It is just that I could not imagine waiting 2 or 3 years."

The last couple in this group had a difficult pregnancy. When the woman was interviewed during her pregnancy, she said that she did not want another child any time soon; the soonest would be in 4 or 5 years. Once the child had been born, however, and after a very easy delivery, the mother stated in the second wave of interviews that she so much loved being a parent that she was sure she wanted a second child soon. She mentioned that she looked forward to giving her first child a sibling and that she intended to do so as soon as possible.

This proves that when respondents declare they are uncertain about having a second child, it is not easy to interpret the sources or reliability of their uncertainty. As a consequence, the development of uncertain intentions over time is rather unpredictable. In our sample, a difficult pregnancy, followed by an easy delivery, was mentioned as the reason for planning to have a second child. The premature death of a foetus before the birth of their first child might have been the cause for the other couple's uncertainty, who ended up not wanting any other children after their first baby.

In conclusion, we would like to take a step back from the specific narratives and put into perspective the vacillation between certain and uncertain intentions we have just described. The straightforward observation is that intentions stated when the first child is either in progress (during pregnancy, as in our sample) or very young are relatively unstable. A second observation is that the reasons for this instability vary but have one thing in common: respondents can anticipate what their lives will or should look like after 2 years, but find it difficult to predict the relative weight they will give to different aspects of their lives. Sometimes, priorities shift, especially during such crucial changes as the transition to parenthood, when the roles of men and women are redefined. Such a shift in people's priorities often translates into modified childbearing intentions. These dynamics suggest that one hypothesis is worth testing: the predictive value of intentions for the second child is likely to be lower for those individuals interviewed close to the birth of their youngest child than for those whose youngest child is older.

5.6 Fertility Decisions in Context

We have shown that fertility intentions are multidimensional constructs that are associated with different types of uncertainty and that identifying a time frame for the realisation of these intentions is a relatively complex exercise. In this last section we argue that childbearing intentions are also dependent on the normative context.

The ample literature on European fertility shows that individual fertility intentions are strongly shaped by economic and policy contexts and by individuals' position in the social hierarchy. For example, all over Europe, men and women usually finish their studies and wait until they have a stable job before they start a family. Hence individuals with higher levels of education have their first child later than their lower-educated peers. In most countries, people with lower income have more children than wealthier individuals. Many comparative studies have also shown that couples have more children in countries where women can easily combine work and family; for example, through the availability of subsidised, high-quality child care. Chapter 2 in this volume gives more details on the effect of family policies on fertility.

The influence of the normative context on fertility decisions is less often studied (see Chap. 6 in this volume). The TPB depicts personal attitudes and the attitudes of close relatives as important factors that influence people's intentions. These individual attitudes are, in turn, shaped by the normative context, i.e., by widely shared expectations of what should be done, accompanied by sanctions against those who do not meet these expectations (widespread disapproval or legal sanctions). The qualitative data are well suited to explore the relationship between normative contexts, individual attitudes and fertility decisions, because norms are sometimes difficult to measure in surveys (Rossier et al. 2012). In this section, we present a meta-analysis of the studies which have used between one and three of the data sets described in the "Data and Method" sections (published articles or papers presented at conferences). We discuss the influence of the normative context on fertility intention under three headings: (1) the emergence of a culture of childlessness, (2) changing gender roles and fertility decisions and (3) social change and the resilience of values.

5.6.1 The Emergence of a Culture of Childlessness

A culture of voluntary childlessness seems to have emerged in countries that have adopted a post-modern vision of the benefits of childbearing and where individuals experience high constraints to childbearing. People sharing a modern vision of childbearing have children because they see it as a normal step in the transition to adulthood: having children is part of a normal life course. Individuals sharing a post-modern vision of childbearing consider having (or not having) children a voluntary lifestyle choice, which is motivated by the quest for personal fulfilment (Van de Kaa 1996, p. 425). The analysed sample populations from different countries (Bulgaria, France, Germany, Hungary, Italy and Poland) varied widely in their attitudes to childlessness. The culture of childlessness seems most widespread in the western German sample. Western German women find it acceptable – and perhaps even the best solution for them – not to have a child (Salles et al. 2010; Rossier et al. 2012). This attitude is not due to indifference towards children or motherhood. On the contrary, respondents who choose to stay childless value children highly and

think that children deserve the best. However, they noted that in their surroundings mothers often had to sacrifice their personal and professional lives, in part because of the rather limited formal child-care options available in western Germany until recently. As a consequence, they share the widespread belief that one has to choose between two incompatible alternatives: either personal accomplishment or family life. As one German respondent put it, "If somebody decides to have children, for me it's either children or a career. Both together, that doesn't fit" (childless woman, 34, single). Also commonly expressed is the wish to remain childless because respondents consider the sacrifices of motherhood too demanding for them. In part, these views are linked to traditional expectations that see women as sole carers for children below age three. In Italy, where a 'modern' vision of the family has remained quite strong, the wish to remain childless is relatively infrequent in our sample (Bernardi et al. 2009). Yet, the few Italian women who do not want to have children state reasons similar to those observed among their German peers. Women also feel that having children may jeopardise their place in social life. Women's independence and sociability, which are linked to employment (if not power), are now part of the social representation of women and it is hard to sacrifice them to have children.

In contrast, in Poland, voluntary childlessness does not seem to be a desirable alternative. This is consistent with the only modest shift towards the post-modern values of the second demographic transition observed in Poland (Sobotka 2008). All the respondents in the Polish sample think children are very important and they all want to have children someday. Mynarska's (2009b) analysis of the value of children in Poland depicts a strong social pressure against childlessness in her sample. The high position of having children in the value system of Polish men and women is sustained by social norms and a complex system of sanctions and rewards. Many elements of social control and social pressure sustain the norm of parenthood, with a 'punishment' for (even unintended) childlessness that can be as severe as being left by the partner. Mynarska shows that many benefits of having children listed by the respondents are typical of a 'modern' vision of childbearing as opposed to a post-modern view that sees childbearing as an act of personal fulfilment. Respondents often referred to the advantages of adopting a 'normal', socially authorised life course, where having children bestows adult status, entails establishing a 'real' family, binds a couple's relationship and also provides a pathway for transferring material possessions and emotional heritage. Compared to their peers in other countries, Polish respondents also emphasised the importance of care, support and company in old age as main benefits of childbearing.

5.6.2 Changing Gender Roles and Fertility Decisions

The results of our studies show that child-care options are of paramount importance for understanding the ways in which respondents envision and practise gender roles, which, in turn, shape fertility intentions. Besides eastern Germany, France is the

only country analysed here which provides affordable and ample public and/or private child-care arrangements for children under the age of three. French respondents appreciate these options and make good use of them. They believe in combining work and family: for them, it is possible and even preferable for mothers with young children to stay in the labour market (Salles et al. 2010; Rossier et al. 2012). Crèches are also widely accepted in eastern Germany. One female respondent stated that going to the crèche very early was good for the "social development" of the child (Mynarska et al. 2009). This view is typical of eastern German and French respondents.

In western Germany and Italy, the lack of affordable child-care options and negative attitudes towards non-maternal child care mean that most women stop working after childbirth until the time their child goes to kindergarten. When their children attend primary school, they work part-time. In the eastern European post-socialist countries studied here (Bulgaria, Hungary, Poland), women are also expected to stay at home when they have small children. Child-care options below age 3 are limited and perceived negatively. Strong norms about mother's care at an early age are aptly described by a Hungarian respondent (childless woman, aged 32), who articulated her surprise about the different cultures of child care: "I can't even imagine how they manage that … A complete stranger brings up their kids? … All my readings are against it! They all argue for staying home with your baby as long as you can…" (Mynarska et al. 2009, p. 15).

Policies favouring (or failing to support) the family-work combination shape individuals' visions of gender roles and their implementation. Men's involvement in family work is positively linked to couples' fertility intentions in those countries where women's participation in the labour market is valued by all. In most contexts analysed here, gender roles are still predominantly traditional, characterised by a low degree of male involvement in childrearing and most other regular household chores. This may explain why in the samples of Bulgaria, Hungary, Poland and Italy men's part in family care does not seem to be important in couples' fertility decision-making (Bernardi et al. 2009; Mynarska et al. 2009). In contrast, men in France and western Germany (Rossier et al. 2012) often contribute to family work and respondents often discuss how the father's contribution to child care could (or could not) facilitate having a(nother) child. However, the visions and practices of gender roles when children are small are different in these two countries. The 'national model' of child care promotes fathers' involvement in the care of small children in France, while discouraging it in western Germany. Both partners in some French couples of our samples worked almost full time and had children without subsidised child care. In all these cases, men contributed greatly to child care. In the western German sample, creative child-care solutions involving the father were not even seen as an option, while their involvement would have (in some cases without negative financial consequences) allowed women to work at least part-time without subsidised child care. All these respondents were reluctant to accept the idea of the father taking parental leave (although German family policy would permit it), even if the choice would not entail a financial loss.

5.6.3 When Values Do Not Fit Practices: The Uneven Pace of Social Change

Individuals' values and behaviors are usually in agreement, conforming to a psychological need to have a coherent approach to life. People's visions of women's paid work are usually in line with what they or their partners do for a living. Their visions of male participation in family work often match what they or their partners do in the household. The same holds true for institutional child care. Eastern European women's attitudes towards work are a good example of this pattern. Most of them have worked on the labour market for decades, but usually in low-paid and low-level positions. They have also kept the responsibility for most of the domestic work. Accordingly, in these countries, paid work is seen as a normal and desirable part of women's life, while a career is considered detrimental to a woman's family (Matysiak and Mynarska 2010).

However, a mismatch between stated ideals and actual practices may arise, especially in times of social change. When structural conditions change, it would be logical to expect individuals to rapidly adjust their behaviours. However, social scientists have repeatedly observed that people do not adapt quickly, because they follow social logics: norms often change more slowly than structural conditions. Obsolete values then hinder people to adopt new behaviours until the values change and catch up with institutional, economic or technological change (Rossier and Bernardi 2009). Salles et al. (2010) have highlighted the remarkable stability of attitudes towards child care and working mothers in all countries covered by our study. In France, even couples with stay-at-home mothers believe in the benefits of organised day care; whereas in Germany, even dual-income couples with children believe in the benefits of exclusively maternal care. Obviously, strong social influence mechanisms, combined with the legacy of prevailing family policies, are at work in sustaining country-specific attitudes towards child care and the role of mothers. Given the considerable inertia in child-care-related attitudes, new policies may be slow in affecting fertility behaviour. In Poland, Mynarska (2010) highlighted the persistence of negative views about delayed childbearing, despite economic and institutional factors favouring a rapid shift to a late-fertility regime. Mynarska suggests that the main reason is the slow pace of cultural change: "while the economic and political system in Poland was transformed basically overnight, culture is more resistant to change" (Mynarska 2010, p. 357).

The argument that normative change may frequently lag behind structural changes in society has been repeatedly made in the social science and demographic literature. The instances of mismatch between structural conditions, norms and values identified in our research suggest that individuals' fertility decisions are based as much on their socially-inspired visions of what is right or wrong as on cost-benefit calculations of what is efficient at a given point in time. Since these different dimensions are often conflicting and personal life circumstances often change rapidly, it is no wonder that intentions – which are constructed with life course conditions and limitations, as well as different socially desired goals in mind – are often uncertain and frequently revised.

5.7 Conclusions and Implications for Future Research

In this chapter, we intended to reconstruct the meaning of fertility intentions in order to advance the interpretation of statements on future childbearing. We had three aims. First, we explicitly focused on understanding respondents' uncertainty with regard to their fertility intentions, which had all too often been treated as noise in previous explanatory fertility models. Second, we studied the way in which individuals vary in holding on to their intentions over time and analysed why they changed their minds in less than 2 years (we limited the scope to intentions for having a second child expressed by couples in which the female was pregnant with their first child). Third, we examined how several aspects of the normative context (attitudes towards having children, family policy and dominant norms about the division of labour and the timing of children) shape fertility intentions. In this section, we discuss our findings and conclude with some suggestions for future research on fertility behaviour and the relationship between intentions and realisation.

We developed a typology of fertility intentions along two key dimensions: an individual's intention to have a child in a given time perspective (3 years) and the desire to have a child that underlies this intention. Our results show that taking both dimensions into account is a valid approach as individuals discuss their childbearing plans by referring to them. Importantly, they also express uncertainty: some are uncertain about the timing of childbearing while others have more fundamental doubts as to whether they want to have a child at all. Our results show that when classifying intentions, we must distinguish between the reasons related to the desirability of the outcome and the reasons related to the ability to define a time frame for achieving the outcome. Moreover, uncertainty seems to be caused by a variety of sources: external conditions, individual development, competing goals and personal attitudes. The predictability of intentions depends on the source of uncertainty. If we want to predict people's reproductive behaviours based on their intentions, we have to get a much deeper understanding of the types and sources of uncertainty. The typology presented here offers valuable insights into this topic.

The analysis of the intention dynamics among couples expecting their first child, though only suggestive, shows that intentions are relatively unstable in the months during and after pregnancy. Instability depends on various elements, of which the most salient (in our interviews) seems to be the shift of life priorities when parenthood redefines gender roles in the couple. This redefinition, in turn, causes a shift in fertility intentions. Further research could model the predictive value of intentions in relation to the distance of the stated intention from the previous birth.

Our results concerning the impact of the normative context on fertility decision-making indicate that a 'modern' vision of children (i.e., as a normal part of life) encourages couples to have at least one child, even if they have little support for combining work and family. Couples with a post-modern vision of childbearing (giving birth as a way to personal fulfilment) in a similar situation tend to renounce having children. These hypotheses need to be tested with a purposely chosen set of countries (more or less advanced in the transition towards post-modernity and more or less

supportive of the work-family combination) and quantitative data. Another finding related to the context concerns the prevailing norms about child care. Widespread norms against men's involvement in child care as well as norms rejecting formal child care act as brakes on fertility intentions. These norms seem to be strongly linked to the type of family policy and hence vary from country to country. However, within countries, they are widely shared and do not seem to be linked to the availability of child care at the personal level and to individual attitudes to gender roles. The role of norms and their interrelation with personal attitudes could be explored further (with qualitative or quantitative data) using the concept of 'subjective norms' of the TPB. However, we suggest to expand this concept so that these social expectations and their impact on fertility decisions could be better accounted for (i.e., not only "significant others" should be included) (Rossier and Bernardi 2009).

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Chapter 6
Fertility-Related Norms Across Europe: A Multi-level Analysis

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6.1 Introduction

Reproductive decision-making does not occur in a social vacuum. Apart from the fact that – in the large majority of cases – two partners are involved in the process, those partners are also thought to take their social contexts – and the changes therein – into consideration. The nation state constitutes a very important social context, as the citizens of a state are exposed to common cultural, economic and institutional influences. The Theory of Planned Behavior (TPB) offers a useful framework to examine the mechanisms by which national contexts influence fertility behaviour as it suggests that contexts influence fertility intentions and behaviour through their influence on individuals' attitudes, norms and perceived behavioural control (Ajzen and Madden 1986; Klobas 2010; Liefbroer 2011). In this chapter, we will focus on cross-national differences in norms about fertility behaviour, as norms constitute one of the factors by which contexts can influence the decision-making process. We present information on the norms of Europeans about a range of fertility issues, followed by an in-depth examination of how individual norms about

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fertility decision-making are linked to a country's progression in the Second Demographic Transition. To examine this issue, a multi-level analysis on data from the European Social Survey is performed. Finally, we briefly discuss potential policy implications of our findings and promising avenues for future research.

In the REPRO project, several multi-level cross-national studies have been conducted to examine the influence of macro-level factors on elements of the reproductive decision-making process. Testa (2010) studied to what extent child-timing and child-number intentions were influenced by the economic situation in a country and by the childbearing experience of the generation of the parents of the people who currently are of childbearing age, and Merz and Liefbroer (2011) examined how the educational gradient in completed family size varies by welfare state regime. Here – as an example of how macro-level factors can influence fertility decision-making – we focus on another element of the fertility decision-making process – the cross-national analysis of differences in norms regarding fertility behaviour (Liefbroer and Merz 2009; Merz and Liefbroer 2012).

6.2 Differences in Fertility-Related Norms Across Europe

Within sociology, *norms* are generally defined as statements about whether certain behaviours are prescribed (they should be done) or proscribed (they should not be done) (Liefbroer and Billari 2010; Settersten and Mayer 1997). Such norms can either be general or situation-specific (Finch and Mason 1991; Lesthaeghe and Moors 2002). Norms are often thought to be shared within a society as a whole. However, this does not necessarily have to be so. At the least, they tend to be shared within certain groups of actors, so-called reference groups (Merton 1968). In addition, norms are supposed to be backed up by sanctions (Durkheim 2009 [1894]). Such sanctions can be relatively mild, like jokes or small remarks about the norm-transgressive behaviour, but they can also be severe, like stigmatization and social exclusion. Settersten and Mayer (1997) distinguish positive sanctions to keep people on the 'right' track from negative ones to bring individuals 'back in line'.

Previous work has shown that norms are important for demographic decision making across the life course (Liefbroer and Billari 2010; Settersten and Mayer 1997). Demographers have often underlined the importance of norms and changes in norms for demographic choices, especially fertility-related ones (Billari et al. 2011), but also for the transition of leaving the parental home (Billari and Liefbroer 2007; Settersten 1998). In many societies, more or less explicit ideas exist about normative demographic behaviour and about when and in what order events in the life course should occur or not occur and individuals feel guided by these "cultural timetables" (Settersten and Hagestad 1996b, p. 186). Norms thus fulfil an important psychological function in regulating the life course (Heckhausen 1999) and life course transitions. Because norms fulfil these important cultural and psychological functions, it often is unnecessary to attach sanctions to them. Even without the existence or application of sanctions, many people will still act in accordance of existing norms.

The concept of norms can be used at the macro and the micro level. At the micro or individual level, the attitude of an individual about the appropriateness of a specific behaviour can be viewed as this individual's 'personal norm'. At the macro or societal level, a norm refers to how society-at-large feels about a specific behaviour. This can be referred to as being a 'societal norm'. However, it is extremely rare that all members of society feel exactly the same about the appropriateness of a specific behaviour. Therefore, it is more useful to discuss about the strength of a social norm than about the existence of a norm. The strength of a norm in a country depends on the proportion of people that subscribe to the norm and on their willingness to apply sanctions to those who transgress it. This view acknowledges that even norms that are shared by a minority may still be important in shaping the behaviour of sizeable portions of the population, and may influence the behaviour of people who do not share that specific norm.

6.2.1 Types of Fertility-Related Norms

Several types of fertility-related norms can be distinguished: timing norms, quantum norms, sequencing norms and combination norms (Liefbroer and Billari 2010). *Timing norms* are expectations about the appropriate age at or age range within which behaviours should occur. Lower and upper age limits for specific behaviours are defined as cultural timetables (Settersten and Hagestad 1996a, b). With respect to fertility behaviour, timing norms refer to the age when men and women are considered to be too young to become parents or too old to have (additional) children. The age before which men and women are deemed too young to have a child is called the lower age deadline for fertility, and the age after which men and women are deemed too old to have children is called the upper age deadline for fertility. The period between these two deadlines can be called the social reproductive life span, i.e., the period within which it is deemed permissible to have children. *Quantum norms* refer to the number of times that events should occur or not occur. It is possible to distinguish among an appropriate ideal number of times that an event should occur as well as between lower and upper limits. Regarding fertility behaviour, quantum norms refer to the number of children individuals should or should not have. Just like in the case of timing norms, one could distinguish between a lower quantum limit and an upper quantum limit. The norm about the appropriateness of being childless can be viewed as a special type of a quantum norm, as it refers to the appropriateness of having a 'quantum' of zero children. *Sequencing norms* concern the order in which events in the life course, in the same or different life domains, should occur. With respect to fertility behaviour, an example of a sequencing norm is the order of parenthood and marriage. Is it allowed to have a child outside marriage? With the increasing popularity of unmarried cohabitation, one could also think about norms about the proper sequencing of cohabitation, marriage and parenthood. Finally, *combination norms* prescribe or proscribe the combination of certain behaviours. Within the fertility domain, a prime example of such norms is the appropriateness of combining parenthood and (full-time) employment.

6.2.2 Data and Operationalization

The data come from the third wave of the European Social Survey (ESS), in which a special module measuring norms about demographically relevant behaviour was included. The module aimed at understanding the views of European citizens on the organisation of the life course and of their strategies to plan their own lives. Data were collected during 2005 and 2006 in 25 European countries. The ESS intends to be representative of the residential population of each participating nation aged 15 years and older, regardless of nationality, citizenship or legal status. Everyone who had been living in a country for at least one year and who had no immediate plans to return to their country of origin could be selected as respondents. Strict guidelines were used to obtain a dataset of high quality. An effective sample size of at least 1,500 respondents in each round (800 for countries with less than two million inhabitants) was intended. Additionally, the ESS aimed at a minimum response rate of 70 %. This was not achieved in all countries and the response rates varied between 46.0 % and 73.2 % with an average of 63.4 % The sample sizes varied between 995 (Cyprus) and 2,916 (Germany). In total, data on 47,099 respondents from 25 countries were used. The mean age of the respondents was 46.3 years ($SD = 18.4$) and 53.8 % was female. See Stoop et al. (2010) for an extensive account of data collection methods.

A range of questions on fertility-related norms were posed in ESS 2006. First, norms about lower and upper age deadlines for childbearing were asked. The specific questions posed were:

- *Before what age would you say a woman/man is generally too young to become a mother/father?*
- *After what age would you say a woman/man is generally too old to consider having any more children?*

People could reply that they thought that people were never too young or too old to have children, or they could provide a specific age. Half of the respondents got the female version of these questions, and the other half had to answer the male version of these questions. Assignment to the male and the female version was randomized.

Second, quantum norms were measured by asking if people approved or disapproved of voluntary childlessness. The specific question posed was:

- *How much do you approve or disapprove if a woman/man chooses never to have children?*

Respondents had to answer on a five-point scale ranging from ‘strongly disapprove’ to ‘strongly approve’, and respondents were randomly assigned to the male or female version of this question. The focus was on the appropriateness of voluntary childlessness rather than on that of childlessness in general, because it was expected that people might be more strongly opposed to voluntary childlessness than to childlessness that results from infecundity, as the latter type of childlessness is outside an individual’s control.

Finally, combination and sequencing norms were measured by asking how approving individuals were about two types of behaviour. The questions posed were:

- *How much do you approve or disapprove if a woman/man has a child with a partner she/he lives with but is not married to?*
- *How much do you approve or disapprove if a woman/man has a full-time job while she/he has children under 3?*

Answers were given on a five-point scale ranging from 'strongly disapprove' to 'strongly approve'. Again, a random half of the respondents were posed the male version of these questions, whereas the other half answered the female version.

6.2.3 Country Differences in Fertility-Related Norms

Fertility timing norms were measured by asking before which age men and women are too young to have children and after which age they are too old to have additional children. First, it is interesting to know whether there were respondents who did not perceive a lower or upper age deadline. A bare one per cent of all respondents stated that there is no lower age deadline for childbearing (1.0 % did not perceive a lower deadline for women, and 1.5 % did not do so for men). In all countries, these percentages were very low. Therefore, it can be concluded that – across Europe – almost everyone felt that people can be too young to have children. The proportion of Europeans that felt that there is no upper age deadline for childbearing was higher. Four per cent of respondents felt that there is no upper age deadline for women, and 8.8 % felt that there is no such age deadline for men. Latvia was a clear outlier in this respect, with 19.3 % stating that there was no upper age deadline for women and 27.5 % stating that there was no such deadline for men. In all other countries, the percentages of respondents who did not perceive an upper age deadline were much lower, with Belgium having the lowest percentages (0.8 % for women and 2.6 % for men).

The next issue is, what kind of age deadlines respondents across Europe perceived. An overview on the average lower and upper age limits broken down by country is presented in Table 6.1.

As we did not want to drop respondents who did not perceive an age deadline from our analysis, these respondents got assigned a deadline that more or less coincides with the biological age deadline. The lower age deadline given to these respondents was 15 years for both men and women, the upper age deadline for women was set at 50 years and that for men at 60 years. The results for the lower age deadline in the first two columns of Table 6.1 show that relatively little variation existed across Europe in the mean lower age deadline for childbearing. It was around 19 years of age for women and between 20 and 21 years of age for men. The lowest mean age deadlines were found in Latvia (18.1 years for women and 18.7 years for men), whereas the highest lower age deadlines were found in Ireland (20.7 years for women and 22.0 years for men). Given that the biological age deadline

Table 6.1 Average lower age limit for first child and upper age limit for last child, by sex and country

	Lower age limit		Upper age limit	
Country	Females	Males	Females	Males
Austria	18.6	20.0	43.0	48.7
Belgium	19.4	20.6	40.4	44.8
Bulgaria	19.1	21.2	40.1	42.2
Cyprus	19.6	21.1	42.3	46.9
Denmark	19.9	21.1	40.3	44.9
Estonia	18.8	20.4	42.1	47.6
Finland	19.0	20.3	41.9	48.3
France	19.4	21.1	42.0	47.4
Germany	19.1	20.7	41.2	46.1
Hungary	19.8	22.0	39.0	43.9
Ireland	20.7	22.0	41.5	44.4
Latvia	18.1	18.7	40.5	42.8
Netherlands	19.5	20.8	40.5	44.9
Norway	18.9	20.0	41.4	46.6
Poland	18.7	20.2	40.3	44.9
Portugal	18.3	19.6	42.2	45.6
Romania	17.9	19.6	41.5	44.9
Russia	19.1	20.8	40.1	44.0
Slovakia	19.1	20.6	40.1	44.6
Slovenia	19.3	21.2	41.6	45.9
Spain	19.2	20.0	42.1	44.5
Sweden	19.5	20.9	41.7	46.9
Switzerland	19.4	21.1	41.3	46.4
Ukraine	18.7	20.6	41.3	44.0
United Kingdom	19.0	20.2	41.9	46.3

is about 15 years of age, these findings imply that respondents felt that young people are socially ready for parenthood only 4 or 5 years after they have become biologically ready for it. The third and fourth columns of Table 6.1 show the mean upper age deadline for having children in different European countries. In most countries, the mean age after which women are considered to be too old to have additional children was between 40 and 42. Austria and Hungary – two neighbouring countries – had the most extreme mean values. In Austria, the mean age after which women were considered to be too old to have any children was 39, whereas it was 43 in Hungary. Not surprisingly, the upper age deadline for men to have children was substantially higher, varying from a low of 43.9 in Austria to 48.7 in Hungary. Just as in the case of the lower age deadline, we see a quite large difference between the social age deadline and the biological age deadline. Quite long before it becomes biological impossible to become a parent, men and women are already socially expected to defer from parenthood. This gap between the biological and social upper deadline is particularly large for men, as their biological capacity to beget children lasts until far beyond their late 40s.

Table 6.2 Average social reproductive period, by sex and country

	Social reproductive period	
Country	Females	Males
Austria	24.4	29.5
Belgium	21.0	24.3
Bulgaria	21.0	21.5
Cyprus	22.6	25.8
Denmark	20.4	23.9
Estonia	23.4	27.5
Finland	22.9	28.1
France	22.5	26.4
Germany	22.1	25.6
Hungary	19.2	22.4
Ireland	20.9	23.2
Latvia	22.9	24.5
Netherlands	21.0	24.3
Norway	22.5	26.7
Poland	21.6	24.9
Portugal	23.8	26.1
Romania	23.6	25.5
Russia	21.0	23.7
Slovakia	21.1	24.3
Slovenia	22.3	25.0
Spain	22.9	24.5
Sweden	22.3	26.0
Switzerland	21.8	25.4
Ukraine	22.7	23.7
United Kingdom	22.9	26.2

Roughly estimated, a woman's biological reproductive life span covers a period of about 35 years, from age 15 until age 50. Men's biological reproductive life span is less easy to determine, but if we would fix their upper age limit at age 60, it would span a period of even 45 years. By calculating the difference between the mean lower and mean upper age limit of childbearing in the respective countries, one could calculate what we would like to term the 'social reproductive life span', that is the period within which it is socially deemed acceptable to have children. The length of this social reproductive life span is presented in Table 6.2.[1] The mean length of the social reproductive life span for women is around 22 years, with a low of 19.2 years for Hungary and a high of 24.4 years for Austria. For men, the mean length of their social reproductive period is around 26 years, with a low of 22.4 in

[1] The mean length of the social reproductive life span in Table 6.2 does not always exactly match the difference between the mean lower and upper age deadlines in Table 6.1, because the number of respondents on which the calculation of the lower and upper age limit is based differs somewhat within a country.

Table 6.3 Average percentage disapproval of selected fertility behaviours, by sex and country

	Voluntary childlessness		Childbirth while cohabiting		Working full-time and children under 3	
Country	Females	Males	Females	Males	Females	Males
Austria	29.1	26.3	15.7	16.5	56.7	13.3
Belgium	14.9	18.8	13.2	13.3	25.3	4.3
Bulgaria	84.4	82.0	34.9	37.7	46.9	14.1
Cyprus	63.3	56.2	46.5	41.7	14.3	4.3
Denmark	6.0	6.0	8.9	8.5	15.0	2.1
Estonia	71.2	74.4	24.6	32.3	54.1	7.8
Finland	10.9	20.7	11.2	13.2	13.2	2.3
France	25.1	35.8	10.9	15.9	31.5	8.0
Germany	23.7	22.9	15.9	16.4	45.2	8.5
Hungary	52.1	50.6	12.4	16.1	44.3	3.5
Ireland	15.1	18.0	26.4	23.1	24.3	5.4
Latvia	54.7	56.9	21.2	29.4	35.1	11.2
Netherlands	11.9	14.2	15.0	13.8	51.5	8.8
Norway	8.4	7.7	6.8	7.9	14.9	4.3
Poland	51.3	55.0	31.8	29.8	28.9	4.9
Portugal	23.0	24.2	13.4	11.4	17.7	8.4
Romania	60.7	62.1	48.1	45.3	34.5	11.1
Russia	83.3	81.9	37.0	42.9	53.3	8.1
Slovakia	55.9	54.1	41.2	40.4	45.5	8.3
Slovenia	38.4	43.2	15.1	18.5	29.5	12.7
Spain	22.7	28.6	18.6	17.9	23.1	9.2
Sweden	4.0	9.2	5.7	6.3	20.4	10.7
Switzerland	15.6	16.6	18.4	21.3	59.0	13.1
Ukraine	85.6	85.2	53.5	56.0	58.9	11.9
United Kingdom	7.0	7.9	20.7	20.1	37.8	3.2

Hungary and a high of 29.5 in Austria. Overall, these results show that the social reproductive life span is much shorter than the biological reproductive life span. Thus social norms strongly restrict the life span within which men and women are expected to have children. With a few exceptions – like Austria and Hungary – variation in the ideas about the length of this social reproductive life span seems to be limited across Europe.

Norms about childlessness were measured with the question, "How much do you approve or disapprove if a woman/man chooses never to have children?" As the reference to the *choice* of being childless makes clear, this norm was not about childlessness in general, but about the voluntary choice to remain childless. To estimate the norm towards voluntary childlessness, we calculated the mean level of disapproval – respondents answering either *disapprove* or strongly *disapprove* – of choosing to remain childless. An overview of disapproval rates for the ESS countries is given in the first panel of Table 6.3. It shows that large variation existed

between countries in disapproval rates with respect to voluntary childlessness. Disapproval rates of female voluntary childlessness varied from 86 % in Ukraine to 4 % in Sweden.

Disapproval rates for voluntary childlessness for men varied between 6 % in Denmark to 85 % in the Ukraine. In ten European countries, a majority of the population disapproved of voluntary childlessness. Almost all these countries were located in the Eastern part of the continent. At the same time, another nine countries – mostly Western European ones – had less than 20 % of the population disapproving of voluntary childlessness of either men or women. A final interesting observation can be made with regard to a gender difference in childlessness norms. In many countries, among which Estonia, Romania, Latvia, France, Portugal, Spain, Netherlands, Finland and Sweden, the disapproval of voluntary childless men was stronger than the disapproval of female voluntary childlessness.

Various sequencing norms can exist with respect to childbearing behaviour. Within the ESS norms were measured with regard to having children while one is cohabiting unmarried and with regard to combining full-time employment and caring for young children. Disapproval rates of these norms for the different countries can also be found in Table 6.3. In the middle panel of Table 6.3, information on the percentage of respondents that disapproved of having children while cohabiting unmarried is presented. Only in the Ukraine more than 50 % of respondents disapproved of this behaviour. In Scandinavian countries, only a small minority disapproved of having children while living in a consensual union. Overall, quite some variation in this norm existed. In the right hand panel of Table 6.3, the percentage of respondents who disapproved of a mother or a father combining a full-time job and having a child under the age of 3 are presented. Again, considerable variation existed among countries with regard to combining motherhood and full-time employment, but the pattern of disapproval was quite different from the one observed for other norms. A majority of respondents in Ukraine, Estonia and Bulgaria disapproved of being full-time employed and having a child below the age of 3, but the same was also true in Switzerland, Austria and the Netherlands, countries that had much less strict norms with regard to other aspects of childbearing behaviour. In addition, disapproval of combining motherhood and a full-time job was even surprisingly high in Scandinavian countries, with between 13 and 21 % of respondent disapproving of this combination. Another striking observation that can be made on the basis of Table 6.3 is that norms for men and women differed very strongly. This is illustrated in Fig. 6.1. For example, in The Netherlands more than half of the respondents disapproved of full-time female labour force participation while having little children whereas only nine per cent disapproved of males combining these two roles. In many other countries, such as Austria, Ukraine, Switzerland, Hungary, and others, comparable double standards existed with respect to male and female behaviour.

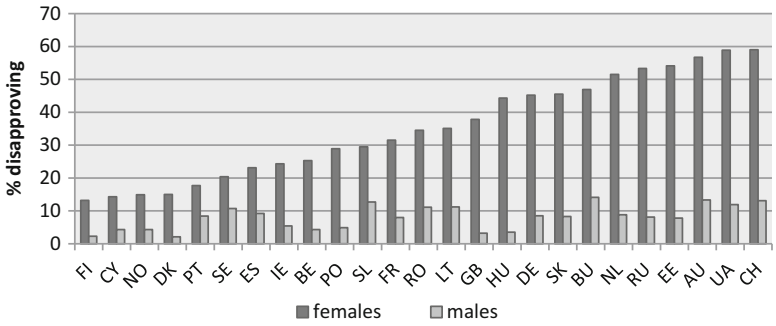

Fig. 6.1 Disapproval of females and males combining full-time employment and having children under the age of 3, by country

6.3 The Second Demographic Transition and Fertility-Related Norms: A Multi-level Analysis

The descriptive findings presented in the previous section show that substantive variation in childbearing norms exists across Europe. What these descriptive findings do not reveal though, is how large the variation in these norms between countries is, compared to the variation in these norms within countries. If relatively little variation exists between countries, a focus on country differences in norms does not make much sense, as there is little variation to be explained in the first place. If, on the other hand, relatively much country-level variation in norms exists, explaining this variation becomes an important task. Therefore, a first question that will be answered in this section is: "How much of the variation in childbearing norms that exists in Europe is explained at the national level?"

Multilevel modelling offers a useful tool to answer this research question. In what can be considered one of its most basic applications – the so-called variance partitioning model (Goldstein et al. 2002) – the total variance that exists within a multi-country dataset like the ESS is split into a part of the variation that exists within each of the countries and a part of the variation that exists between countries. The intra-class correlation – ρ – gives the proportion of the total variation in each norm that can be accounted for by the national-level. If this proportion is low, relatively little cross-national differences in norms exist; if it is high, relatively much cross-national differences in norms exist.

If substantial variation in norms between countries is observed, the next question is how this variation can be explained. As briefly discussed above, a large variety of explanations for such variation has been suggested. These explanations include cultural, economic, and institutional factors, or a mix of these types. In this section, we will explore the relationship between childbearing norms and one crucial dimension of temporal and spatial demographic differences – the extent to which demographic behaviour in a country resembles what can be considered as the advanced stages of the Second Demographic Transition. So, the second research question to be

answered in this section is, "To what extent is cross-national variation in childbearing norms related to differential advancement of countries in terms of the Second Demographic Transition?"

Second Demographic Transition Theory (SDT) offers an explanation of both temporal and spatial variation in family formation norms, attitudes and behaviours. Although Van de Kaa and Lesthaeghe (Lesthaeghe 1995; Van de Kaa 1987, 2001) affirm that part of this variation is explained by economic and institutional factors, their main contribution is their emphasis on the importance of value changes in modern societies. Processes of secularisation, modernisation and individualisation have increased the importance that individuals attach to autonomy and self-realization. This emphasis on autonomy and self-realization will lead individuals to agree with societal norms about family formation to a limited extent at best, to develop intentions that are more likely to deviate from mainstream opinions about what constitutes 'proper' demographic behaviour, and to increase the likelihood that they engage in non-standard demographic behaviours. Existing research has documented cross-national and cross-cohort variation in demographic attitudes and behaviours (Lesthaeghe and Moors 2002; Lesthaeghe and Surkyn 1988).

Clearly, the SDT has implications for understanding variation within and across countries in childbearing norms. It is expected that – within societies – people with characteristics that are known to be related to autonomy and self-realization will be less likely to endorse norms that prescribe or prohibit specific childbearing-related behaviours (Liefbroer and Billari 2010). Therefore, we hypothesize that the endorsement of childbearing norms will be weaker among respondents who live in cities, are young, non-religious, and highly educated, and who say to value autonomy than among respondents with the opposite set of characteristics. In addition, we hypothesize that – across societies – the endorsement of childbearing norms will be weaker the less advanced a country is in the SDT.

To examine the extent to which cross-national variation in childbearing norms is related to cross-national variation in countries' position in the Second Demographic Transition, we take advantage of a recent SDT-index developed by Sobotka (2008). This index uses basic demographic indices – like the mean age of mother at first birth (MAFB) and the total divorce rate (TDR) – to examine to what extent the demographic behaviour within a country resembles what Lesthaeghe and Van de Kaa considered to be the advanced stages of the SDT process. Based on the performance of each country on the respective indices, for each country a SDT-score is calculated. The higher the score, the further advanced a country is in the SDT process. We will include this SDT-score as a country-level variable in our multilevel models of fertility norms.

6.3.1 Measurement

SDT-Index The country-level index for a country's advancement in the Second Demographic Transition has been developed by Sobotka (2008, pp. 85–88). He distinguished a demographic and an attitudinal and value dimension of the

SDT. We used the demographic index, as it was available for more countries than the value index. In addition, the latter index is too closely related to the norms that are studied here. The demographic SDT-index was constructed by combining a country's performance on seven different indices, viz. (1) mean age of mother at birth of first child, (2) the sum of age-specific fertility rates below age 20, (3) the percentage of non-marital births, (4) the total first marriage rate, (5) the mean age at first marriage, (6) the total divorce rate, and (7) the prevalence of cohabitation. Each country's SDT score could vary between 0 – indicating hardly any advancement in the SDT-process – and 10 – indicating maximum advancement in the SDT-process. Of the 23 countries for which this index was available, Sweden had the highest score (8.8) and Romania had the lowest score (1.7). No information was available for Belgium and Cyprus.

Level of Urbanisation People who live in urban areas often hold more liberal attitudes towards a range of issues than people who live in rural areas. This difference is linked to the fact that a cosmopolitan culture is dominant in large cities, either as a result of selection – people who hold liberal values move to urban areas – or of exposure to other types of cultures that are more likely in urban settings (Fischer 1995). In the ESS 2006, respondents were asked in what type of locality they were living. Answer categories included: farm or home in the country side (1), country village (2), town or small city (3), suburbs or outskirts of small city (4), and big city (5). This variable was treated as an interval-level variable with scores ranging from 1 to 5.

Level of Religiosity Secularization is often viewed as one of the determining processes of the SDT (Lesthaeghe and Surkyn 1988). Thus, people who feel a strong religious commitment are expected to hold less liberal views and to be less approving of innovative demographic behaviour than people who are not religiously involved. In the ESS, three items tapped religious involvement: a self-evaluation of level of religiousness (measured with the question "How religious are you?"), frequency of church attendance and frequency of prayer. A factor analysis showed that these three items clearly loaded on one strong underlying factor. Therefore, a factor score was constructed. The higher the factor score, the more religiously involved respondents were.

Educational Attainment Usually a strong positive correlation is observed between educational attainment and approval of liberal family attitudes and behaviours (Thornton et al. 1983). The higher educated are expected to be more exposed to ideas and behaviours that differ from the mainstream, and to be better able to assess the advantages and disadvantages of these different types of behaviour, leading to a less strong adherence to traditional views on family life. In the ESS, the ISCED classification of educations was used to rank respondents on a scale running from less than primary education (1) to the second stage of tertiary education (7).

Importance of Autonomy One of the most important ingredients of the SDT is the greater importance people attach to being autonomous (Lesthaeghe and Surkyn 2008). In the ESS, Schwartz's (2007) Human Values Scale included an item that directly tapped the importance people attach to autonomy. Respondents had to evaluate

to what extent the statement "It is important to make my own decisions and be free" pertained to themselves. Answer categories ranged from *not like me at all* (1) to *very much like me* (6).

Additional Control Variables In addition to the substantive individual-level variables discussed above, age and gender were included in the multilevel analyses. Age in years was included, centred around the mean, as well as age squared divided by 100, to test whether age effects were linear or curvilinear. Finally, a dummy variable *male* was included to examine whether men and women differed in their approval of different aspects of childbearing behaviour.

6.3.2 Analytic Strategy

We present a series of multilevel models to examine the relationship between fertility norms and SDT. The first model is a so-called variance-partitioning model, that allows one to estimate how large the between-country variation in norms is relative to the variation within countries. In a second model, the country-level SDT-index is included. This model provides an estimate of the extent to which cross-national differences in norms are related to the differential advancement of the SDT across Europe. In a third model, individual-level variables are added to the model. These variables are supposed to tap individual-level openness to the SDT. To be more specific, on the basis of previous theorizing and research, we expect that people living in urban areas, who are not strongly religiously committed, who are highly educated, and who value autonomy are more open to SDT-like attitudes and behaviour than people with the opposite set of characteristics. Thus, one explanation for the country-level SDT-effect could be that in countries that *lead* in the SDT-process there are more persons with individual characteristics that favour SDT-like attitudes and behaviour than in countries that *lag* behind in the SDT-process. If such a 'composition effect' would be present, one would expect that the effect of the country-level SDT-index would become much smaller – or even statistically insignificant – after controlling for these individual characteristics. If – on the other hand – the effect of the SDT-index would remain important, this would suggest that people with the same kind of individual characteristics hold different norms depending on the kind of country they live in, and one would need to look for a genuinely country-level explanation for the observed differences.

6.3.3 Results

Results of multi-level models of fertility norms are presented in this section. Because norms were measured separately for women and men, ten sets of multi-level models were estimated. However, the models for norms of women and those for men gave

comparable results for most types of norms. To save space, we concentrate on norms for women, and only present results on norms for men if these differ from those for women.

6.3.3.1 Lower Age Deadline for Childbearing

The first norm to be discussed is the age before which one feels that a woman should not have children. In Table 6.4, we show the estimation results of our multi-level models. Model A presents the results of a variance-partitioning model. It shows that only a very small proportion of the variance ($\rho = 0.04$) was explained at the national level. This implies that individual-level differences were much more important than country-level differences. Model B shows that the limited country-level differences in lower age deadlines were unrelated to the advancement of countries in the SDT-process, although the SDT-estimate almost reached statistical significance ($p = .051$). It suggests that the lower age deadline for childbearing for women was somewhat higher in countries that are far advanced in the SDT than in countries that lagged behind in that regard. Model C includes a number of potentially important individual-level variables. The higher educated and those living in urban areas perceived higher lower age deadlines for childbearing for both men and women than people with a low level of education or living in rural areas. In addition, people who strongly valued autonomy perceived a higher lower age deadline for men than people who did not value autonomy very strongly (results not shown). Model C also reveals gender

Table 6.4 Multilevel regression model predicting lower age deadlines for childbearing for women ($N = 19{,}751$)

	Model A		Model B		Model C	
	b	se	b	se	b	se
Fixed parameters						
Constant	19.10***	0.12	18.41***	0.37	17.78***	0.39
SDT			0.12	0.06	0.12	0.06
Urbanisation					0.04*	0.02
Religiosity					0.04	0.02
Education					0.13***	0.02
Autonomy					0.02	0.02
Age					–0.00	0.00
Age squared					–0.01*	0.01
Male					0.14***	0.04
Random part						
σ(u)	0.57***	0.09	0.53***	0.08	0.52***	0.08
σ(e)	2.84***	0.01	2.84***	0.01	2.83***	0.01
Derived part						
ρ	0.04		0.03		0.03	

*$p < .05$; **$p < .01$; ***$p < .001$

differences in that men perceived a later lower age deadline for childbearing for women than women themselves did. Finally, the age deadline for women did not differ very much between age 20 and 65, but was clearly lower for people above the age of 65. Results on the lower age limit of childbearing for men (not shown) were largely in line with those for women. Only a small proportion of the variance was explained at the country level ($\rho = 0.05$), and the SDT-variable did not have a statistically significant effect on this norm.

6.3.3.2 Upper Age Deadline for Childbearing

In Table 6.5, the estimation results of multi-level models of the upper age deadline for childbearing for men are presented. There was little cross-national variation in the age after which women and men should not have any children anymore. Just 3 % of the variation in the upper age deadline for women (results not shown) and 4 % of the variation of the upper age deadline for men occurred at the national level. Thus, variation in this norm within countries was much more important than variation across countries. In addition, the upper age deadline for childbearing among women did not vary by the SDT-score of a country (result not shown). For men, though, the SDT-score of a country did make a difference – see Model B.

The further advanced a country was in the SDT process, the higher the upper age deadline for childbearing among men became. The drop in the intra-class coefficient from 0.04 to 0.02 suggests that about half of the – limited – between-country

Table 6.5 Multilevel regression model predicting upper age deadlines for childbearing for men ($N = 18{,}752$)

	Model A		Model B		Model C	
	b	se	b	se	b	se
Fixed parameters						
Constant	45.52***	0.34	42.12***	0.86	41.42***	0.95
SDT			0.59***	0.14	0.61***	0.15
Urbanisation					0.06	0.05
Religiosity					0.17*	0.07
Education					0.44***	0.05
Autonomy					–0.12*	0.06
Age					0.02***	0.00
Age squared					0.02	0.02
Male					–0.88***	0.12
Random part						
σ(u)	1.60***	0.25	1.20***	0.19	1.23***	0.19
σ(e)	8.30***	0.04	8.30***	0.04	8.26***	0.04
Derived part						
ρ	0.04		0.02		0.02	

*$p < .05$; **$p < .01$; ***$p < .001$

variation in this norm can be attributed to a country's progression in the SDT process. In Model C, important individual-level correlates of the SDT were included in the model. No effect of level of urbanisation was observed. However, other indicators – educational attainment, religiosity and autonomy – did show significant effects. The upper age deadline was higher with increased educational attainment, implying that the higher educated were more lenient towards late childbearing than people with a low level of education. The effect of autonomy ran in the opposite direction. The more people valued autonomy, the more they were opposed to late childbearing. Older adults objected less to late childbearing among men than younger adults. Finally, men mentioned a lower upper age deadline for childbearing among men than women do. The difference was almost a year (0.88).

6.3.3.3 Voluntary Childlessness

People may not only have norms on the timing of childbearing, but also about whether to have children, and if so, how many. Unfortunately, we do not have information on the minimum and maximum number of children that people should have. But information is available about whether people approve or disapprove of voluntary childlessness. In Table 6.6, results of our multi-level analysis of the level of approval of voluntary childlessness of women are presented. Model A show the results of the variance-partitioning model. A substantial proportion (39 %) of the variance in the norm on voluntary childlessness among women was situated at the country level.

Table 6.6 Multilevel regression model predicting approval of voluntary childlessness of women (N=20,399)

	Model A		Model B		Model C	
	b	se	b	se	b	se
Fixed parameters						
Constant	2.88***	0.15	1.19***	0.36	1.11***	0.38
SDT			0.30***	0.06	0.28***	0.06
Urbanisation					0.01*	0.01
Religiosity					−0.14***	0.01
Education					0.05**	0.00
Autonomy					0.02*	0.01
Age					−0.00***	0.00
Age squared					−0.01***	0.00
Male					−0.11***	0.01
Random part						
σ(u)	0.74***	0.11	0.52***	0.08	0.54***	0.08
σ(e)	0.92***	0.00	0.92***	0.00	0.89***	0.00
Derived part						
ρ	0.39		0.24		0.27	

*p<.05; **p<.01; ***p<.001

The same was true for voluntary childlessness of men (result not shown). These percentages were much higher than those observed for timing norms, implying that there was much more variation in childlessness norms than in timing norms across Europe. Model B show that the effects of the SDT-score was positive and highly statistically significant. In countries that are far advanced in the SDT process, voluntary childlessness of women was met with much more approval than in countries where the SDT had not had much of an impact yet. The mean differences between countries that were one standard deviation below the mean on the SDT-index and countries that were one standard deviation above the mean on that index was about 0.6 on a five-point scale for approval of female's voluntary childlessness. The effect of SDT for approval of male childlessness was comparable (result not shown). In Model C, important individual-level covariates were added to the model. For SDT-related variables, the results were in line with expectations. Approval of voluntary childlessness was higher (a) among people living in urban areas than among people living in rural areas, (b) among people who were not religiously involved than among the religiously committed, (c) among the higher educated than among those with lower levels of completed education, and (d) among those who strongly valued autonomy than among those who do not put much value on autonomy. At the same time, there was little evidence that composition effects were responsible for country-level differences in norms on voluntary childlessness. First, the direct effect of the SDT-score on these norms remained almost the same after including individual-level covariates. Second, the relative variation at the country level even increased – from 0.24 to 0.27 – after the inclusion of individual-level covariates. Composition effect thus seemed to partially mask existing country-level differences in these norms. Finally, some comments on the gender and age differences in approval of childlessness are in order. Men and women did not differ in their approval of childlessness among men, but men approved somewhat less of female voluntary childlessness than women did. Approval of voluntary childlessness was highest among people below age 35, and clearly decreased with increasing age, after age 35.

6.3.3.4 Having Children While Cohabiting Unmarried

Another norm that may influence fertility behaviour is whether people approve of having children outside marriage. In many European countries, having children outside marriage does not mean having a child outside a partner relationship. Rather, people will have children while cohabiting unmarried with a partner (Liefbroer and Goldscheider 2007; Sobotka and Toulemon 2008). Results of a multi-level analysis of how much people approved of women having children within an unmarried cohabitation are presented in Table 6.7. The intra-class coefficient of Model A shows that about one-fifth of the overall variance in approval of having children within a consensual union occurred at the national level ($\rho = 0.19$). Although this proportion is lower than that for approval of childlessness, it is still considerable. This underscores our earlier observation that the norms on having a child while

Table 6.7 Multilevel regression model predicting approval of women having a child while cohabiting ($N = 20{,}641$)

	Model A		Model B		Model C	
	b	se	b	se	b	se
Fixed parameters						
Constant	3.30***	0.10	2.12***	0.22	2.15***	0.24
SDT			0.21***	0.04	0.17***	0.04
Urbanisation					0.01*	0.01
Religiosity					–0.26***	0.01
Education					0.04***	0.01
Autonomy					0.04***	0.01
Age					–0.01***	0.00
Age squared					–0.02***	0.00
Male					–0.11***	0.01
Random part						
σ(u)	0.48***	0.07	0.31***	0.05	0.33***	0.05
σ(e)	0.99***	0.00	0.98***	0.00	0.91***	0.00
Derived part						
ρ	0.19		0.09		0.12	

*$p < .05$; **$p < .01$; ***$p < .001$

cohabiting unmarried vary rather strongly across Europe. The results for Model B show that approval of having a child within a non-married partnership was higher in countries that were far advanced in the SDT process than in countries where the SDT had not caught on. The mean differences between countries that were one standard deviation below the mean on the SDT-index and countries that were one standard deviation above the mean on that index was about 0.4 on a five-point scale of approval. This difference was somewhat smaller than the difference observed for the childlessness norm, but it is still quite substantial. Results for approval of men having a child within a cohabitation were comparable to those for the approval of women doing so. In Model C, individual-level covariates were included in the multi-level models. Almost all effects of SDT-related indicators were in the expected direction. Approval of having a child while cohabiting unmarried with a partner was higher among people who were living in urban areas, were non-religiously committed, were highly educated, and valued autonomy highly, than among people with the opposite set of characteristics. Furthermore, the direct effect of the SDT-index was about 20 % smaller in Model C than in Model B, suggesting that some of the SDT-effect can be attributed to differences in the composition of countries with respect to the proportion of the population that was inclined towards SDT-like behaviour. At the same time, the intra-class coefficient of Model C was somewhat larger than that of Model B, suggesting that – overall – not controlling for individual-level compositional differences led to an underestimation of the importance of country-level differences.

6.3.3.5 Combining a Full-Time Job and Small Children

A final norm to be discussed is how much people approve of combining a full-time job and caring for children under the age of 3. Earlier, it was observed that a 'double standard' still exists in most countries with respect to this norm. Approval of men combining a full-time job and small children is high, but approval of women doing so is much lower. The estimates of our multi-level models of approval of combining these two roles for women are presented in Table 6.8.

The intra-class coefficient in Model A for women's behaviour (0.17) implies that the approval of women who combine a full-time job and raising small children varied considerably across Europe. This was less so for men ($\rho = 0.07$). In Model B, it is examined whether country-differences in this combination norm were related to the advancement of a country in the SDT. The results did not confirm this idea. There was no relationship whatsoever for the approval of men's combination behaviour (results not shown), and the effect for women failed to reach statistical significance ($p = .062$). This latter finding suggests that there was a tendency that people in countries with a high score on the SDT-index were somewhat more likely to approve of women combining care for a small child and a full-time job than people in countries with a low score on the SDT-index. Results on relevant micro-level covariates are presented in Model C. The more religious people were, and the lower their level of education was, the less approving they were about women combining a full-time job and caring for small children. Level of urbanisation and importance of autonomy did not exert a statistically significant effect on this norm. Men and women

Table 6.8 Multilevel regression model predicting approval of women combining full-time employment and caring for children under age 3 ($N = 20{,}641$)

	Model A		Model B		Model C	
	b	se	b	se	b	se
Fixed parameters						
Constant	2.96***	0.09	2.44***	0.29	2.48***	0.31
SDT			0.09	0.05	0.07	0.05
Urbanisation					0.01	0.01
Religiosity					–0.14***	0.01
Education					0.06***	0.01
Autonomy					–0.01	0.01
Age					–0.00***	0.00
Age squared					–0.02***	0.00
Male					–0.10***	0.01
Random part						
σ(u)	0.45***	0.07	0.42***	0.06	0.43***	0.06
σ(e)	1.00***	0.00	1.00***	0.00	0.97***	0.00
Derived part						
ρ	0.17		0.15		0.17	

*$p < .05$; **$p < .01$; ***$p < .001$

differed in their approval of women combining employment and care: men disapproved more of such behaviour than women did. Finally, approval of women combining a full-time job and a small child were quite similar for respondents between the ages of 25 and 55. After age 55, disapproval of this combination rapidly increased.

6.4 Conclusion

This chapter explored cross-national differences in fertility-related norms and showed how multi-level models can be used to examine micro-macro linkages. In particular, we studied whether norms regarding fertility were weaker in countries that have progressed further along the path of the Second Demographic Transition (SDT) than in countries where the SDT has not yet 'caught on'. Based upon the results presented in the previous section, at least three important conclusions can be drawn about country differences in norms related to childbearing. First, country differences in norms on the lower and upper age deadline for childbearing of both men and women are small. The same is true for country differences in approval of men combining a full-time job and having small children. Roughly, a bare 5 % of the variation in answers among Europeans can be accounted for by the country-level. The remaining variation is situated between individuals rather than between countries. At the same time, there is substantial cross-national variation in approval for voluntary childlessness, having a child while one is cohabiting unmarried, and women combining a full-time job and small children. Between 15 % and 40 % of the variation in approval levels is located at the country level.

Secondly, cross-national variation in approval of voluntary childlessness and in approval of having children in a consensual union are strongly related to how far a country is 'advanced' in the SDT process. Approval levels of these behaviours are much higher in countries that are far advanced in this process, than in countries that are only in the early stages of the SDT. The link between the SDT index and the lower and upper age deadlines for childbearing and approval of combining a full-time job and having small children is much weaker or even completely non-existing. These results suggest that some childbearing norms may be changing as countries advance in the SDT process, but that other norms remain more or less unaffected by a country's advancement in the SDT. Thus, the Second Demographic Transition does not necessarily imply a general weakening of demographically relevant norms. It seems that people have become more tolerant towards not having children at all and towards having children while cohabiting – that is, a stable relationship rather than an officially legitimized relationship is required. Approval of combining employment and care for young children is not related to the SDT, suggesting that norms about gender equality are at least partially driven by other factors than a general cultural shift towards autonomy. It may be that institutional factors, like the availability of good quality child-care that facilitates the combination of motherhood and childbearing, are much more important in that regard.

Thirdly, across Europe, the highly educated, the religiously uncommitted, and those who value autonomy are much more likely to approve behaviours that are in line with the SDT than people with the opposite set of characteristics. At the same time, country-level differences in norms related to voluntary childlessness and having a child outside marriage remain prominent, even if compositional differences in these individual-level characteristics are taken into account. This suggests that people in countries that are far advanced in the SDT-process hold different norms about these behaviours even if their individual characteristics are similar. This suggests that the social context has a huge impact on the norms people hold across Europe. In that respect, this study clearly showed the importance both of compositional and genuinely contextual effects (Moore and Vanneman 2003).

Although our approach suggests that country-differences in fertility norms at least partially reflect differences in countries in their advancement in the SDT-process, several limitations of this approach have to be acknowledged. First, the SDT-index constructed by Sobotka (2008) includes information on fertility-related behaviours, and this may artificially increase the correlation between the SDT-index and norms related to fertility. Alternatively, an index that excludes fertility measures could be used, but such an approach has the opposite drawback that it disregards a central dimension of the SDT-process. Second, using an overall SDT-index disregards the fact that the actual relationship between different demographic behaviours can be relatively weak (Kalmijn 2007), and lumping all these aspects in a single index may lead one to overlook important correlations between specific demographic indicators and fertility-related norms. In this chapter, the focus was on the link between the very general concept of the SDT and fertility-related norms, but studies that dissect the SDT-index into its constituent parts will allow a more detailed study of which macro-demographic behaviours are linked to which fertility-norms. Finally, using this overall SDT-index assumes that countries with different demographic profiles (e.g., one country with high fertility and high divorce and another country with low fertility and low divorce) could be ranked at a comparable stage in the SDT process, and this assumption can be questioned. An alternative approach could be to use a weighted or non-additive model to rank-order countries along a SDT-dimension.

This chapter started with a discussion of the theoretical pathways linking macro-level conditions and individual-level outcomes. The empirical study presented here, nicely showed the potential of multi-level modelling to get a better understanding of this linkage. Future research will benefit from the availability of high quality databases that include macro-level data, like the Contextual Database of the Generations and Gender Programme (www.ggp-i.org) and the Comparative Family Policy Database (www.mpidr.de). At the same time, these examples illustrate the need for high-quality micro-level data on a large score of countries. Only if this combination of high quality micro- and macro-level data is realized, will multi-level analysis be able to show its full potential as a tool to increase our understanding of the contextual factors that influences the fertility decision-making process.

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Chapter 7
Reproductive Decision-Making: A Milestone, and the Road Ahead

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7.1 Introduction

This volume has presented the theoretical background and main research findings from a collaborative project to improve our understanding of reproductive decision-making in Europe. Chapter 1 started with an exposition of recent fertility trends and argued that understanding these trends requires a systematic approach that includes macro-level analysis along with knowledge of individual reproductive decision-making. To this end the chapter outlined a theoretical background model, presented in Fig. 1.2, which places childbearing in a macro- and micro-level interactive environment. The broad spectrum of macro-level fertility analyses was selectively presented with an exposition in Chap. 2 of the effect of family policies on fertility. A central requirement of the theoretical model was a theory of individual reproductive decision-making; the Theory of Planned Behavior (TPB) was selected and

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applied in Chap. 3 to an analysis of childbearing intentions in European countries. Chapters 4 and 5 focused on the concept of childbearing intentions: whether they are realized or remain unrealized, and whether the concept is adequately defined and measured. Finally, Chap. 6 considered macro-micro links to examine differences in fertility-related norms across European countries.

In this final chapter, we reflect on the main findings of the project. Given the central position of the TPB in our model, we first pay attention to the question of what new knowledge demographers gain from application of the TPB to studies of intentions and fertility, then consider what has been gained from embedding micro-level reproductive decisions in a macro-level environment. Along with highlights and limitations of work conducted within REPRO, these sections of the chapter outline directions for further research. The chapter ends with a brief discussion of related policy issues.

7.2 Reproductive Decisions: The Micro Level

Use of the TPB as the framework for micro-level analysis of fertility intentions, their formation and their realization grounded the REPRO project in a theory with an established empirical tradition outside the field of fertility research. Below, we summarize major insights that were gained from application of the TPB to fertility decision-making and outline future research directions.

7.2.1 Theory: Applicability of the Theory of Planned Behavior (TPB) in the Fertility Domain

Traditionally, demographers investigate formation and realization of fertility intentions with econometric models where the explanatory variables are selected on the basis of available fertility theories and empirical findings. Often, it is assumed that one and the same set of theories explains both intentions and their outcome, childbearing. By contrast, an intention to take action is a fundamental concept in social psychology, where theories rigorously define intentions, and their antecedents, separately from the actions consequent on intentions, and the factors that contribute to or inhibit action. Application of the TPB in the REPRO project supports our belief that fertility research can profit from close inspection of such theories and their incorporation into demographic models.

As discussed in Chap. 1, the TPB defines three proximate determinants of intentions: attitudes, subjective norms and perceived behavioural control. Sociodemographic factors that are often linked to fertility intentions and behaviours are proposed to influence intentions and behaviours by affecting the formation of attitudes, subjective norms and perceived control (as shown in Fig. 1.3). This theoretically different approach to the study of intentions also requires a different approach

to empirical modelling; adaptations of econometric modelling can be seen in Billari et al. (2009), Dommermuth et al. (2011) and Cavalli and Klobas (2013), but methods that construct and test multiple paths simultaneously, such as the structural equation modelling used in Chap. 3 fit the theoretical approach even better.

Another advantage of the TPB is that it stimulates our thinking about the dependent variable of interest. In the TPB, an intention can be used to predict either a behaviour (action) or the goal or outcome of performing the behaviour. Intentions are better predictors of behaviours than of goals. Realization of an intention to have a child is goal attainment, not behaviour. It is therefore imprecise to classify "having a child" or "childbearing" as fertility "behaviour". Childbearing is the result of many actions, often specifically aimed at the achievement of pregnancy,[1] including stopping use of contraceptives, changing sexual behaviours, possibly even changing partner, i.e., a range of behaviours may be situated between the intention to have a child and its realization. A different conceptualization of the TPB would be required for each behaviour if the TPB were to be used to model fertility behaviour. Furthermore, an intention to have a child is different from the intention *not* to have a child, and at least some of the beliefs norms and control factors that give rise to each, and to their realization, can be expected to differ rather than be positive and negative poles of the same variable (Chap. 5; Cavalli 2010, 2011; Spéder et al. 2009, 2010). The TPB approach also differs from other approaches in a fundamental assumption: reasoning about intentions and goals is not necessarily rational.

7.2.2 Empirical Support and Issues

Although the micro-level data examined in this book do not fully meet the theoretical and empirical requirements of the TPB, they nonetheless provide useful observations about formulation and realization of fertility intentions. One requirement for strong correlation between intention and behaviour is that the period between formulation of intention and the subsequent behaviour should be short enough for the intention to remain stable (Fishbein and Ajzen 2010). Dommermuth et al. (2014) show that realization of intentions to have a child immediately or within the next 3 years differ.

Fertility intentions are held with differing levels of certainty (Chaps. 3 and 5; Cavalli and Klobas 2013; Klobas 2010; see also the seminal work of Morgan 1981, 1982). Including some degree of uncertainty provides a better prediction of actual behaviour (Cavalli and Klobas 2013; also Thomson 1997). Chapter 5 suggests important opportunities for further research based on a more nuanced classification of fertility intentions. Different types of uncertainty in fertility intentions are themselves the result of different sources of uncertainty, not just in external conditions,

[1] Miller (e.g., Miller 2011a) discusses this as proceptive behaviour, i.e., behaviour directed toward having a child.

but also in personal context. Factors associated with different types of uncertainty include a person's stage of development and competing intentions and goals.

Although fertility intentions are not perfect predictors of fertility outcomes, they are the strongest predictors available. Definite intentions not to have a child (or another child) are strong predictors of failure to have a child, for couples as well as individuals (Cavalli and Klobas 2013; Klobas et al. 2011). Intentions to have a child (or another child) are good, albeit imperfect, predictors of realization for both childless people and parents, especially after accounting for barriers to realization (Dommermuth et al. 2014). Spéder and Kapitány (Chap. 4; Kapitány and Spéder 2012) developed a new typology of fertility outcomes for REPRO, distinguishing between (i) intentional births (realization of intention to have a child), (ii) the postponement and (iii) the abandonment of intentions to have a(nother) child.

7.2.3 Fertility Intentions and Behaviour: Where Is the Partner?

The TPB is a model of individual action, while having a child is the outcome of the behaviour of a couple. How, then, can the TPB be applied? The primary mechanism is through the individual's beliefs about how much their partner wants them to have a child and how their partner will respond to their having another child. The conceptualization of the TPB permitted by the GGS data used in REPRO omitted such direct references to the partner. A more complete conceptualization would include the partner as a normative reference ("My partner wants me/us to have a child"), and possibly also within a behavioural belief ("My partner would be pleased if I/we have a child") (Ajzen and Klobas 2013).

Another approach involves matching or comparing TPB data obtained from couples. Klobas and Marzi (in Klobas et al. 2011) matched men and women in cohabiting and married couples using data from the Italian Multipurpose Household Survey on Family and Social Subjects (FFS). Inclusion of attitudes, subjective norms and perceived behavioural control improved prediction of couples' agreement about having a child compared to Rosina and Testa's (2009) model, which omitted these cognitions.

Philipov (in Klobas et al. 2011) also used Rosina and Testa's (2009) model as the basis of a set of binary logistic models of couples' agreement in Bulgaria. In this case, the TPB was implemented separately for men and women, but the dependent variable was based on the nature of the couple's agreement or disagreement about fertility intention (both yes, both no, disagreed). All three TPB factors strongly differentiated between couples who agreed to have a child and those who agreed not to have a child; lower and less consistent TPB factor effects differentiated between couples who disagreed and those who agreed.

Other REPRO studies observed negotiation and redefinition of intentions in response to partnership formation and pregnancy. Couples negotiate family size expectations. Both men and women revise their family size expectations upward to

meet a partner's higher expected family size, or downward to meet a partner's lower expected family size (Iacovou and Tavares 2011). Instability in intentions during pregnancy and the months following childbirth reflects shifts in life priorities as gender roles are redefined (Chap. 5).

7.2.4 Future Research

The TPB was used as an organizing framework in REPRO. It was undoubtedly effective, but that does not mean that it is the only possible or valid theoretical model of the formation and realization of fertility intentions, or that its application is free of problems. We have already made several observations about implications of the REPRO project for micro-level studies of fertility intentions and behaviour. We raise some additional issues here.

As implied earlier, the TPB is not domain-specific. The quality of the conceptualization and operationalization of the TPB in any field, including fertility, is the responsibility of researchers in the field. Demographers are challenged to improve conceptualization and measurement for fertility research; the standard question of the type "*Do you intend to have a child during the next x years*?" may benefit from much greater precision. Yet this generic question can also be of use where more detailed measurement would make surveys too expensive and approximation of the outcome, having a child, is satisfactory for the researcher's needs. Greater precision in conceptualization and measurement is also needed where the three antecedents are considered; we recall that the GGS did not measure perceived behavioural control well because the concept of *perceived control* for the specific outcome of interest, having a child, was not explicitly formulated.

The TPB is not the only theoretical approach adopted in demography for the study of fertility intentions. Miller's (Miller 2011a, b; Miller and Pasta 1995) traits-desires-intentions-behaviour (T-D-I-B) model of fertility motivations is specific to demography, yet seldom used to guide empirical study. Although in many ways different, the T-D-I-B and the TPB also share several common concepts, and intentions, behaviours and outcomes (and traits and desires, if taken together as background factors) occur in the same sequence in both models. Much of the teasing out of intentions in REPRO, while adding further information, is also consistent with the conceptualization of intention in the T-D-I-B. On the other hand, the TPB offers no domain-specific guidance on how background factors might be sequenced. Joint consideration of the specific concepts and propositions of both models, along with the theoretical, methodological and empirical advances made within REPRO, might produce further insights into fertility motivations and their realization.

Bachrach and Morgan (Bachrach and Morgan 2011, 2013; Morgan and Bachrach 2011) proposed a new Theory of Conjunctural Action (TCA). The TCA addresses aspects of fertility that are not explicitly addressed by the TPB, including post-hoc rationalization of childbearing decisions. Nonetheless, measurement of the concepts in the TCA is underdeveloped (Johnson-Hanks et al. 2011), limiting opportunities

for empirical development, testing, and application of the TCA as well as its comparison with the TPB and other models. As Klobas (2011) points out, a number of the TCA concepts, such as a conjuncture, have analogues in the TPB, and some of the understanding gained from REPRO might inform measurement in studies that adopt notions from the TCA.

We briefly alluded earlier to issues associated with the role of competing intentions in the TPB. Barber (2001) and Philipov (2009, 2011) have noted the role of competing intentions in the formation and realization of fertility intentions. The TPB is able to deal with competing intentions in several ways. Statements about competing intentions, such as "I don't want to try for a child until I finish my studies" were made by interviewees in the qualitative studies reported in Chap. 5 and Cavalli (2011). Such statements might be modified for inclusion in TPB batteries as beliefs about relative priorities. Fishbein and Ajzen (2010) discuss how to model choice between alternative courses of action with the TPB. Further research on the role of competing intentions and effective and efficient ways of measuring and modelling competing intentions and their effects is warranted.

7.3 Reproductive Decisions in a Macro-Context

The REPRO project emphasized the importance of the macro-context in order to understand the micro-dynamics of fertility decision-making processes. In line with this contention, all empirical chapters of this volume paid attention to the macro-context in which fertility decisions are made. The same holds true for several other publications stemming from the REPRO project (Ajzen and Klobas 2013; Merz and Liefbroer 2012; Spéder and Kapitány 2014). Without trying to be exhaustive, a number of substantive and methodological conclusions can be drawn from these empirical analyses.

7.3.1 Key Empirical Findings

First, in the most general sense possible, all these studies show that the macro-level matters. Cross-national differences are observed in people's fertility intentions, in the TPB factors (attitudes, social norms, perceived behavioural control) determining these intentions, in the relative importance of specific TPB factors influencing intentions, and in the link between intentions and realized childbirth. For example, Chap. 6 shows that norms related to fertility decision-making differ across Europe. Some of these country differences, e.g., in the lower and upper age deadline for childbearing, are small. However, in other instances (approval of voluntary childlessness, having a child while cohabiting) substantial cross-national variation exists. To provide another example, Ajzen and Klobas (2013), in a study including France, Germany, Hungary, Italy, and Russia, show that the influence of the attitude to have

a child within the next 3 years on the intention to have a child within this same time-period among 25–34 year olds with a partner and a child, is about equally strong in all these countries. However, the influence of the norm to have a child within 3 years on this intention is clearly strongest in Germany, and weakest in France. In France, however, perceived behavioural control to have a child within 3 years is strongly related to the intention to have a child.

Second, the studies conducted within the REPRO project attest to the multifaceted nature of the types of macro-factors that influence fertility decision-making. Different studies conducted within the REPRO project emphasize the importance of (i) policies and other institutional arrangements, (ii) culture, and (iii) economic development. Chapter 2 suggests that family *policies* matter. In particular, it is the mix of different types of policies (financial support, leave entitlements and child-care arrangements) that seem to influence fertility. This is also evidenced by a more recent study that examines long-term changes in fertility rates across a range of European countries (Luci-Greulich and Thévenon 2014). The same conclusion – that a consistent set of arrangements to facilitate the combination of parenthood and employment may be key to fertility – is also drawn in Chap. 3, where cross-national differences in the key elements of the TPB are analysed. Chapter 6 and Merz and Liefbroer (2012) suggest that *cultural* differences between countries matter as well. Norms concerning childlessness and concerning having a child within a cohabiting union are more lenient, the further a country has progressed in the Second Demographic Transition – as measured by Sobotka's (2008) SDT-index. At the same time, progression in the SDT is not related to norms concerning the upper and lower age deadlines for childbearing. The qualitative research presented in Chap. 5 suggests that country-differences in the fertility decision-making process are linked to a combination of social influence processes – a cultural phenomenon – and the legacy of long-standing policy arrangements. A study by Testa (2010) suggests the importance of *economic* factors. The higher the GDP in a country, the weaker the intention to have a first child and the stronger the intention to have a second child in the next 3 years is, suggesting that entry into parenthood is postponed in countries with a high level of economic development, but once childbearing has started, the transition to higher-order births occurs relatively fast.

Third, the REPRO-project used a combination of different approaches to examine macro-level influences on the fertility decision-making process. In most studies, e.g., in Chaps. 2 and 4, a comparison is made between a small number of countries. It is formally tested whether differences between countries in the strength of the relationships within the micro-level model are statistically significant, and these differences are theoretically interpreted using tacit background knowledge about the societies involved. Philipov et al. (2009) call this type of approach *comparative micro-studies*. Spéder and Kapitány (2014) provide another interesting example of this approach; they found that respondents in Germany and France were more likely to realize their fertility intentions than those in Bulgaria, Hungary, and Georgia. They suggested that this difference is to a large extent due to the fact that cultural changes in Eastern European societies have not kept abreast with structural transformations, leading to a situation of social anomie in which people refrain from making

long-term commitments to family life. In a sense, the qualitative study on fertility decision-making, reported on in Chap. 5, could also be viewed as a comparative micro-study. Several other studies, e.g., Chap. 6, Testa (2010), and Merz and Liefbroer (2012) use an approach that Philipov et al. (2009) termed *macro-micro studies*. In such an approach, information from the micro- and the macro-analytical levels is combined in one statistical multi-level model. It is possible to decompose the total variation in the model into separate components at both levels and to perform statistical tests on whether specific macro-factors influence the micro-level behavioural or attitudinal outcomes. As an example, Merz and Liefbroer (2012) examined what factors cause cross-national variation in the approval of voluntary childlessness. The results showed that approval of childlessness not only depends on micro-level factors such as age, religiousness and level of education, but also on the macro-context. In particular, people in countries that are further advanced in the Second Demographic Transition show stronger approval of childlessness than people in countries that are not very much advanced in the SDT as yet. The availability of child care in a country was not found to be related to country-level differences in approval of childlessness.

7.3.2 Future Research

Several lessons for future research on the macro-micro links in fertility research can be drawn from the REPRO experience.

First, future studies should try to examine the combined influence of cultural, economic and policy factors on the decision-making process. The overview given above shows that all three types of factors were found to be relevant in empirical analyses based on the REPRO project, but none of these analyses tried to include all three types of factors at the same time. Future research should start from a careful discussion of the potential theoretical links between these three sets of macro-factors and individual-level decision-making, and add well-defined empirical indicators of these expected macro-influences in the empirical analysis. Such studies will profit from recent advances in macro-level databases, such as the Generations and Gender Programme Contextual Database (http://www.ggp-i.org/cdb/contextual-database.html) and the Population and Policy Database (http://www.demogr.mpg.de/cgi-bin/databases/PPD), both of which include a wide-range of macro-level indicators with high relevance for understanding fertility decision-making.

Second, the results of our studies of macro-micro links underscore and extend the conclusion of Sect. 7.2 on the micro-foundation of fertility decision-making: the theoretical framework of the Theory of Planned Behaviour offers a useful approach to understanding the key factors influencing the fertility decision-making process, across countries as well as in a within-country setting. However, the cross-national comparisons using the TPB made thus far focus on a small number of countries only. Future studies should try to expand on the set of countries for which indicators of the full TPB model are present and should also try to examine cross-national

differences in the TPB in a longitudinal perspective. This will be possible once panel data from a number of GGS countries that include indicators of all TPB elements will be released.

Third, future research on macro-level effects on fertility decision-making should try to capitalize on the fact that cross-national population-based sample surveys allow two ways of comparing the role of macro-contexts. On the one hand, one can examine differences between countries. On the other hand, one can also examine within-country changes across subsequent cohorts, as macro-conditions also change over time within a country. Combining these two sources of macro-change may increase the variation at supra-individual levels of analysis. Alternatively, studies could try to capitalize on the fact that differences in fertility intentions and behaviours may not only exist at the national level, but also at regional levels within a country (e.g., Aassve et al. 2013). By including the regional level, the scope of multi-level analysis may be widened, provided that the macro-factors of interest vary at a regional level. Examples of variables that show a relatively strong variation at the regional level are the availability of childcare and the strength of normative control.

7.4 Reproductive Decisions: Policy Considerations

The decline in fertility described in Chap. 1 gave rise to considerable policy concern across Europe and elsewhere. A UN enquiry carried out in 2009 (United Nations 2011) found that 27 governments in Europe evaluated the fertility trends in their country as "too low", and only 13 assessed them as "satisfactory". Thirty governments indicated that they had instituted policies related to fertility: 25 with the purpose to "raise" it, and five to "maintain" its level. Only nine governments preferred "no intervention". Beyond governments, civil society organizations and non-governmental organizations[2] alike advocate support for families who want to have more children. Given this situation, policy makers often turn to demographers for advice about how to influence fertility. At the same time, many demographers feel uncomfortable about formulating such advice as they do not want to get entangled in normative discussions about whether, and if so how, states and other bodies should influence decisions that are often considered to be very personal. Within REPRO, policy advice was not a goal. Nonetheless, when invited by policy makers to reflect on the policy implications of the project's scientific results, a number of considerations emerged (Sobotka 2011). We summarize and extend them here.

As noted in Chap. 1, much interest in low fertility among policy makers is based on the fertility gap, i.e., the difference between fertility intentions and actual fertility. This difference signals a window of opportunity for policies to help people realize their

[2] Such as COFACE, IFFD and ELFAC, participants in the EU-funded *Families And Societies* project which was launched in 2013. To focus the discussion better in the following text, we use "policies" to mean both governmental policies and CSO and NGO activities.

fertility intentions. The findings of the REPRO project contribute to identification of such policy opportunities by providing a better understanding of both (i) how people construct their reproductive decisions and (ii) how supporting policies, and obstacles, affect people's ability to realize their intentions.

Our behavioural model (the TPB) points to two key proximate determinants of childbirth and its timing, namely people's fertility intentions and the opportunities that people have to realize their intentions. The TPB also suggests that intentions are the result of people's considerations of the pros and cons of childbearing (their "attitudes"), the social pressure exerted on them by the networks in which they are embedded and the norms that prevail in those networks (their "subjective norms" or "perceived social pressure"), and their perceptions that they are capable of having and caring for a young child (their "perceived behavioural control". Understanding how these factors jointly influence the formation of childbearing intentions and the opportunities to realize them is key to development of successful policies.

7.4.1 The Role of Intentions

First, given the central role of intentions, policy attention should not be focused exclusively on reproductive behaviour, but should also encompass intentions and the micro-level relationship between intentions and their realization. For example, Chap. 4 shows that intentions are realized to a higher degree in countries where societal life is more stable; this suggests that policies should seek to maintain a stable policy environment for reproductive decision-making over the long run. In this connection, recent changes in family policies triggered by the economic crisis in some countries might raise concern about the long-term sustainability of policies, creating an unstable environment which deters people from acting on their intentions to have a child.

Second, separate attention should be given to decisions to have a child and *not* to have a child, rather than inferring knowledge about both types of intention by contrasting them as is usually done in contemporary scientific research.

Third, reproductive decisions are constructed in a macro-level context. As discussed throughout this book and summarized in the previous section, social norms about childbearing differ among countries. Policies and their effectiveness may differ accordingly, i.e., policy instruments that are effective in one setting might be less effective in another: while this is known for reproductive behaviour we find it also holds for reproductive decisions.

7.4.2 Reproductive Decision-Making as a Policy Domain

A fundamental requirement of policies is that they should not harm human rights. To this end, they should not harm individual choices, preferences and attitudes. Some governments and stakeholders therefore prefer to take a "no intervention" stance on reproductive decision-making, leaving the domain entirely to individuals.

Figure 1.3 shows that this type of non-interference in reproductive decision-making is impossible in practice. The three pillars of family policy (child allowances, child care and parental leave, as discussed in Chap. 2) evidently influence perceived behavioural control and therefore construction of intentions. Moreover, as discussed in Chap. 1, policies can also affect subjective norms and attitudes and, since the three antecedents to childbearing intentions are interlinked, changes in one of them are likely to be associated with changes in the others. Thus, a policy that increases the availability of institutionalized child care is likely to increase positive attitudes to childbearing and revise social pressures for having young children, as well as increase perceived control. Yet this is a feasible policy because it does not harm human rights: it enriches individual choices, adding a choice for those who need institutionalized child care without affecting the set of choices available to those who are not interested in it.

We conclude, then, that reproductive decisions are a feasible domain for policy action insofar as policies do not restrict the set of individual choices but lead rather to enlargement. Furthermore, policies enacted in domains such as family policy which have a macro-level link to the micro-level formation of fertility intentions are likely, in any case, to affect reproductive decisions. Full assessment of policy impact, regardless of a policy's primary focus, therefore requires attention to the combined impact of the policy on fertility intentions through perceived control, perceived social pressure and attitudes, as well as its impact on ability to realize intentions once they have been formed. Thus, an increase in actual choices on the one hand is likely to bring with it an unavoidable change in attitudes and perceptions on the other.

7.5 Conclusion

The recent decline in fertility and postponement of childbearing have provoked great interest in reproductive decision-making among demographers. There has been an associated boom in studies of fertility intentions, the majority of which have employed theories and econometric models developed for analysing actual fertility – even though the outcome of interest is fertility intentions. Operationalization of the TPB for reproductive decision making in the GGS (Vikat et al. 2005, 2007) turned things around, with participants in the REPRO project being among the first to utilize an intention-specific theory and modelling approach. As the contributions summarized in this book show, the macro-micro approach taken in the REPRO project offers a rich potential for future studies on fertility decision-making.

The REPRO project was based on the Theory of Planned Behaviour as developed by Ajzen (1988, 1991; see also Ajzen and Klobas 2013; Fishbein and Ajzen 2010). Alternative theoretical approaches to understanding fertility decision-making, like the Theory of Conjunctural Action (Morgan and Bachrach 2011) and Miller's (2011a) Theory of Fertility Motivation, also have the potential to increase our understanding of the macro-micro linkages in fertility decision-making. Although

different, these theories have many commonalities, and future research should benefit from an examination of their commonalities and differences.

Implementation of fertility theories requires their proper operationalization in surveys. Lessons drawn from operationalization of the TPB in the GGS, along with additional suggestions included in this book, will further improve measurement of key components of that theory.

Finally, it is our contention that a better understanding of the process of fertility decision-making will permit policy-makers and other stakeholders to reflect on the – intended and unintended – consequences of policy measures on the fertility decisions of individuals. From our point of view, policy-based thinking about reproductive decision-making should start from the assumption that policies should enable choice – both to have children *and* to not have children. Given that many individuals and couples in industrialized societies seem to end up having fewer children than they would have liked, such policies might be instrumental in reducing the fertility gap.

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