Reproductive Decision-Making in a Macro-Micro Perspective (REPRO)

Synthesis and Policy Implications

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European Demographic Research Papers are working papers that deal with all-European issues or with issues that are important to a large number of countries. All contributions have received only limited review.

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Reproductive Decision-Making in a Macro-Micro Perspective (REPRO): Synthesis and Policy Implications

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[1] Most of these sections are based on papers, reports, deliverables and other materials prepared within the framework of the REPRO project. Authors of these materials are listed below the title of each section where appropriate and the most relevant documents are listed in a footnote on the first page of each section.

1 THE REPRO PROJECT: MOTIVATIONS, AIMS AND MAJOR ISSUES

Population discussions in contemporary Europe are often dominated by the notions of very low fertility rates and inevitable future population decline, which germinated during the period of rapid fertility declines in western Europe in the 1970s and early 1980s. Already in 1984, the European Parliament passed a resolution (No. C127/78) that called for a consideration of "measures to combat this marked trend towards population decline, which is common to all the Member States". (PDR 1984).[2] The intertwined fears of low fertility and decreasing population are closely related to yet another pair of stylised facts: first, women and men across Europe wish to have more children than they actually achieve by the end of their reproductive lives. Second, this 'gap' between intentions and actual behaviour leaves plenty of scope for effective policy action. Such policies would help eliminating some of the obstacles that prevent individuals from having the desired number of children, addressing structural and institutional constraints which are frequently perceived as rationales for policy action (Chesnais 2000; McDonald 2006). The official communication from the European Commission (2005: 5) fully embraces this view, pointing out that the fertility rate in Europe is "insufficient to replace population" and that this low fertility "is the result of obstacles to private choices: late access to employment, job instability, expensive housing and lack of incentives (family benefits, parental leave, child care, equal pay)". In a more dramatic way, the document considered low birth rates "a challenge for the public authorities". Similar concerns have been expressed in a resolution of the

[2] At present (as of January 2011), the official website of the European Parliament features a section on population-related issues with suggestive titles, including a caption below a photo of a baby reading "What's the answer to Europe's demographic deficit?" (see http://www.europarl.europa.eu/sides/getDoc.do?type=IM-PRESS&reference=20080414FCS26499&language=EN#title1).

European Parliament on the demographic future of Europe in 2008 (European Parliament 2008).

Policies may also influence fertility behaviour—indirectly by affecting people's childbearing norms, desires and intentions, or directly by either creating a structure of incentives that would be sizeable enough to increase fertility rates irrespective of people's initial preferences or, most controversially, by deliberately intervening into individuals' decisions, e.g. by restricting access to abortion. The latter option is clearly unacceptable in most democratic societies but also the 'softer' influences on intentions or direct efforts to stimulate fertility rates by enacting economic or other incentives are potentially problematic. It is not clear whether governments of democratic countries should deliberately intervene to influence individuals' private decisions about family size and reproduction, without even having a clear idea about what a socially desired or optimal fertility should be and whether such policies would improve the quality of life and wellbeing of the citizens (van de Kaa 2006).[3] In contrast, policies that would help people realise their unfulfilled 'demand' for children appear to be a win-win strategy, presumably increasing the happiness of the prospective parents and at the same time helping to increase fertility rates in a country without interfering with individual preferences.

The stylised facts and assumptions about fertility and population challenges are not necessarily wrong but they provide a crude and potentially misleading simplification of the complex picture of reproductive decision-making, fertility rates and the role of family-related policies in Europe. The need for a careful and evidence-based research on fertility intentions and fertility behaviour motivated the launching of the REPRO project

[3] While the most commonly considered 'optimal' level of fertility is a population replacement level (which is around 2.07 children per woman in the most developed countries), Lutz and Striessnig (2010) argue that with a high share of university-educated population and a related rapid rise in productivity the optimal fertility may be well below 2 children per woman.

(*Reproductive decision-making in a macro-micro perspective*) that had as its main aim to "fill gaps in knowledge on the factors which drive changes in fertility rates and generate new scientific and policy-oriented knowledge on the reproductive decision-making of contemporary Europeans". The project, concluded in January 2011, has linked together researchers from nine European research institutions and with different disciplinary backgrounds.[4] REPRO saw fertility intentions as a main component of the reproductive decision-making process. As a coherent unifying framework it applied the social psychological *theory of planned behaviour* (TPB, Ajzen 1991, 2005), developed as an extension to the *theory of reasoned action* (Fishbein and Ajzen 1975). The TPB has been used in thousands of studies aiming to explain which factors influence the formation of intentions to engage in certain behaviours and which factors in turn determine whether these intentions are acted upon. Applying the TPB to childbearing intentions has vastly expanded our understanding of the formation of fertility intentions, of the importance of determinants of these intentions and, in turn, of the link between intentions and their realisation or non-realisation (or 'abandonment,' as Spéder and Kapitány's (2010) REPRO study calls it).

[4] The following institutions participated in the project: (1) Vienna Institute of Demography (VID) at the Austrian Academy of Sciences as the leading institution; (2) Institut national d'études démographiques (INED, Paris); (3) Netherlands Interdisciplinary Demographic Institute (NIDI, The Hague, the Netherlands); (4) "Carlo F. Dondena" Centre for Research on Social Dynamics at the Università Bocconi, Milan, Italy; (5) The Demographic Research Institute (DRI) from Budapest, Hungary; (6) Division for Social and Demographic Research at the Statistics Norway, Oslo (SSB); (7) Co-ordination Research Council for Social Development and Social Eurointegration from the Bulgarian Academy of Sciences, Sofia (BAS-RCSD); (8) Institute for Social and Economic Research at the Essex University (UESSEX); and (9) University of Lausanne (UNIL, Switzerland). This last institution conducted research started at the Max Planck Institute for Demographic research in Rostock, Germany.

The REPRO project placed emphasis on studying fertility decisions at an individual (*micro*) level. However, it also aimed at integrating different levels of analysis, which are important for understanding fertility behaviour. Specifically, fertility intentions and behaviour were studied at three levels: (1) the aggregate (*macro*) level, where social, cultural, economic, or institutional conditions are related to aggregate-level outcomes (fertility norms, intentions and fertility rates); (2) the individual (*micro*) level, studying fertility decision-making process, its determinants and outcomes at the level of individual men, women and couples; and (3) the *macro-micro* level, where individual behaviour is conditioned by both individual-level factors such as age, number of children, employment situation or education, as well as institutional conditions of a given country or region. The analysis of numerous national and cross-national datasets was complemented with qualitative studies on the reproductive decision-making process using in-depth interviews conducted in cities in seven European countries. Among various datasets used, the *Generations and Gender Survey*, conducted in numerous European countries (eight of which were included in REPRO), was particularly relevant for the REPRO work as it contained questions on intentions formulated using the theory of planned behaviour (Vikat et al. 2007: 420). The TPB sets rigorous standards for the definition and measurement of intentions. In the case of childbearing, intentions have to be specified by current parity (number of children) of the respondent, and ideally they have to be formulated for a specific time horizon, so that their realisation can be later analysed. Moreover, the certainty and ambiguity of intentions have to be explicitly measured. This is easier achieved when intentions refer to a short time interval, for which respondents have a clearer picture of their likely partnership status and economic situation and when there are fewer external factors that might cause a revision of their intention. For this reason, REPRO has primarily focused on studying short- to mid-term intentions, typically referring to the next three years, rather than lifetime reproductive plans.

In a nutshell, the key facets of the REPRO project can be summarised as follows:

- Multidisciplinary and multi-team work;
- Focused on the elements of the fertility decision-making process, especially on the formation of intentions, their realisation and the factors affecting them;
- Theory-driven, using *theory of planned behaviour* (TPB) as an overarching framework linking different disciplinary perspectives;
- Taking individual-level decisions and behaviour as paramount;
- Linking individual and aggregate-level analyses;
- Studying contextual influences by applying a comparative cross-country framework;
- Using qualitative analysis of narrative data as an essential component;
- Employing a variety of datasets, especially longitudinal panel data suited for the *TPB* framework; and
- Addressing policy-relevant issues

REPRO work has been organised alongside eight work packages. While the first one focused on project management and the last two dealt with synthesising and disseminating the results, five work packages concentrated on conducting the research along the following topics:

Work package 2 (WP2, leader Olivier Thévenon, INED): *The macro level: changes in birth rates*;

Work package 3 (WP3, leader: Jane Klobas): *Contextualised micro level: fertility intentions*;

Work package 4 (WP4, leader: Zsolt Spéder): C*ontextualised micro level: fertility behaviour*;

Work package 5 (WP5, leader: Laura Bernardi): *Fertility intentions and behaviours in context: a comparative qualitative approach*;

Work package 6 (WP6, leader Aart C. Liefbroer): *The macro-micro-conditions of intentions and births*.

This summary document draws extensively from the numerous project deliverables, papers, articles and documents prepared within these five work packages. When citing documents and deliverables summarising the work package work and prepared by the work package leaders, frequently only the work package is listed. Specific materials prepared by individual researchers are cited separately. To prevent this document from becoming excessively voluminous, many details, results and important insights have been omitted. For further details, readers are referred to the deliverables and other useful documents from individual work packages that can be accessed at the REPRO website (www.oeaw.ac.at/vid/repro/documents.html).

The goal of this review is to communicate major findings and achievements and summarise policy-relevant findings of the REPRO project. The analysis of policies belonged to the main objectives of REPRO. The research teams aimed to identify "the implications of the findings for policy strategies which attempt to enhance individuals' and couples' freedom of choice with regard to fertility-related behaviours". The underlying assumption is that policy-relevant analysis should greatly benefit from the project's explicit focus on the components of reproductive decision-making, and fertility intentions in particular. Selected major findings have been highlighted in two '*Policy briefs*'.[5] However, a number of factors, which are elaborated in Section 2, make specific policy inferences and policy recommendations rather difficult. In short, there is a vast array of policies potentially affecting reproductive behaviours which frequently change, supplement or contradict each other, operate in different cultural contexts and may affect particular social and demographic groups in the population in different ways. In addition, policies may have short-term or long-term effects and may affect both the timing of reproduction and the number of children born. It is also important to keep in mind that a vast majority of social policies affecting reproductive decisions were designed with a

[5] Accessible at http://www.oeaw.ac.at/vid/repro/documents.html

different purpose and their potential fertility effects were not an important consideration in their implementation. For these reasons, our policy conclusions, summarised in Section 9, are rather general and cautiously formulated. REPRO findings have shown that the most important avenues for potential policy intervention include job insecurity, gender equality and the reconciliation of work and family.

Structure of this report and the work packages covered

This document mostly follows the structure of individual work packages and reviews the main findings and policy implications based on various reports, papers and deliverables prepared within REPRO, as well as additional policy conclusions supplied by the leaders of work packages 2-6. It is remarkable that although each work package primarily operates at a different level of analysis—micro, macro, or a combination of both levels—each WP analysed datasets for several countries and therefore addressed the impact of societal context. Other than the majority of previous studies, most REPRO work packages also studied fertility intentions and fertility among men, bringing the frequently 'ignored half' of the population into the spotlight. Given the prominence of policy-relevant analysis within REPRO, most sections of this report are complemented with a brief summary of policy inferences mostly formulated by the work package leaders.

The following three sections (Sections 2-4) are framed around the WP2 and give the aggregate (macro-level) view on fertility and policies in Europe. These parts also give a general introduction to some of the key issues discussed in REPRO: the issue of low fertility in Europe and the differences in family policies across Europe as well as policy influences on fertility rates. Specifically, Section 2 gives a general overview of various types of family-related policies, differences in European welfare states and family policy 'packages', and lists some important general

(continued on the next page)

Structure of this report and the work packages covered *(continued)*

considerations that need to be taken into account in policy-relevant analysis. Section 3 highlights cross-country differences in low fertility in contemporary Europe and shows the results of WP2 research on the link between economic development and fertility and on the effects of the cost of children. Section 4 reviews the multifaceted effects of family policies on fertility, mostly based on WP2 results.

In contrast, Section 5, based on WP3, gives the 'micro' picture of the factors influencing the formation of fertility intentions. This section also gives a brief introduction to the *Theory of Planned Behaviour* (TPB) which has motivated most of REPRO research and linked different work packages together (see a summary of the TPB in Appendix 2). Because WP3 studied fertility intentions in different countries, it also provided comparative aggregate-level conclusions on the factors driving cross-country differences in the formation of intentions (Section 5.7).

Section 6 covers mostly WP4 research that examines the factors influencing the realisation of short-term (within three years) reproductive intentions as well as the development of intentions across the life course. Again, by analysing datasets for different contexts, WP4 also discusses some determinants of between-country differences in the share of individuals that were able to realise their intentions (Section 6.2).

Section 7 summarises findings of WP5, which provided qualitative interpretative data analyses of respondents in seven European countries focusing on perceived reproductive norms, gender relations and fertility intentions, as well as on the typology of intentions and their changes. This section provides a narrative framework to the 'larger picture' analysed in the other parts of REPRO and thus greatly contributes to the understanding of intentions formation and realisation.

Section 8, reviewing WP6 work, then connects the 'micro' and 'macro' pictures by analysing multi-country European surveys, looking at the individual and country variations in fertility norms, fertility intentions and the influence of education on completed family size.

2 ANALYSING THE IMPACT OF FAMILY POLICIES AND POLICY 'PACKAGES'

(mostly based on WP 2, coordinated by Olivier Thévenon)[6]

One of the main goals of this document is to assess implications of family-related policies that are in place in different countries of Europe. This seemingly straightforward goal is in effect a particularly complex and difficult undertaking. First of all, many policies influencing family and reproductive behaviours have a wide variety of objectives, such as reducing income inequality and poverty, promoting gender equality, promoting female employment or supporting child development (OECD 2007). Most of them were not enacted with an explicit or implicit aim to influence individual reproductive behaviours, and their success or failure should not be judged by their fertility effects. Furthermore, policies may affect various social groups of men and women in different ways with respect to their age, number of children, educational attainment, employment status, or partnership status. Under certain circumstances, policies may increase fertility, but at the same time have an undesired effect of strengthening the polarisation of reproductive behaviour between groups (WP2, McLanahan 2004). Therefore, findings on the influences of policies at an individual level may not be easily translated into statements about the aggregate impact of policies on fertility rates in a country. Overall, financial support for families has a major impact on the direct and indirect cost of children, but its impact on fertility seems limited. While there is a clear influence on the timing of births, the impact on fertility is often short-lived and the policy influence of completed cohort fertility is often debatable (Sleebos 2003; Gauthier 2007; Thévenon and Gauthier 2011). This debate is further complicated by the fact that it is frequently impossible to disentangle the effects specific policies

[6] Thévenon, O. 2011, "Family policies in OECD countries : a comparative analysis." *Population and Development Review* 37(1): 57-87. OECD. 2011. "Fertility trends: what have been the main drivers?" Chapter 3 in: Doing Better for Families, OECD, Paris. Thévenon, O. and A. Gauthier. 2011. "Family policies in developed countries: a 'fertility-booster' with side-effects." Forthcoming in *Community, Work and Family*.

may have on fertility in the absence of long-term information on policy changes and mutual interactions between different policies. Finally, there is usually no evidence concerning the 'counterfactual' situation, i.e. what would the observed fertility trend be in the absence of given policy measures (Hoem 2008).

There is a bewildering diversity of potentially relevant policies in Europe that may have an influence on reproductive decisions. Roughly, they can be divided into five categories (WP2, see also OECD 2007):

- Policies that support mothers-to-be during pregnancy until delivery;
- Support for childbirth, e.g. a baby kit, vouchers, or a lump sum paid upon the birth of a child ('baby bonus');
- More regular, long-term financial assistance for families to cover the direct cost of children. This comes in various forms, such as family allowance, welfare benefits dependent on the number of children, tax breaks for families with children, or support to cover some education expenses;
- Support designed to help parents balance working and raising children. This category encompasses especially child care and education facilities, work arrangements such as flexible working time and part-time work availability; as well as financial benefits and tax breaks linked to employment;
- Entitlements to paid or unpaid parental leaves for parents who are not in paid employment or who stop working to care for young children.

To put it simply, these policies can be divided into monetary transfers (e.g. 'baby bonus', or tax breaks for parents), leave provisions (especially maternity or parental leave, but also short-term leave possibilities for parents with sick children) and infrastructure provisions (in particular child care facilities). In addition, the provision of health and education and their quality and costs may influence reproductive decisions.

Individual policies, their changes and their influences can be studied using various research designs, but it is the package of different policies, their internal consistency, coherence and compatibility, as well as their stability over time which matters most for reproductive decisions (Thévenon and Gauthier 2011). As Neyer and Andersson (2008: 702) point out, "policies may counteract each other by having different aims or requirements, or they may reinforce each other by being based on the same underlying logic". However, such combinations are particularly difficult to analyse, not least because data on such aspects are frequently not available (Gauthier 2007).

The idea of dividing sets of countries into groups with differentiated mix of 'policy packages' and institutional approaches to families and social stratification was popularised by a 1990 study of western European *welfare regimes* by Esping-Andersen. One of the main criteria for distinguishing different welfare regimes was the extent of *decommodification* (Esping-Andersen 1990), a process, through which welfare state reduces individual's reliance on market forces or wider family support for their well-being. Later, other country groupings by different policy criteria have been developed, usually based on the distinction between policies favouring homecare by parents and policies favouring institutional child care on the one hand, and between different levels of financial support by governments and the structure of the labour market with respect to favouring mothers' return to employment (e.g. Kontula and Söderling 2008), on the other. Alternatively, geographical groupings of countries with relatively consistent policy packages was used (Gauthier and Philipov 2008).

Within REPRO, WP2 used the *OECD Family database*[7] to map cross-country differences in family policy models and update the existing country classification. The quantitative indicators in this database give a much more detailed set of policy characteristics than those used in previous

[7] Accessible at <www.oecd.org/document/4/0,3343,en_2649_34819_37836996_1_1_1_1,00.html>.

studies, enriching the comparisons that can be made. A principal component analysis was performed to characterise how the components of family support are combined and how different countries are located with regard to these 'packages'. The results support the view of persistent differences in the family policy patterns embedded in different contexts of work-family outcomes. Previous groupings of policy regimes are only partially corroborated, owing to considerable within-group heterogeneity and the presence of group outliers. Four main groups of OECD[8] countries were identified (Thévenon 2011; see the position of individual countries plotted in Figure 1:

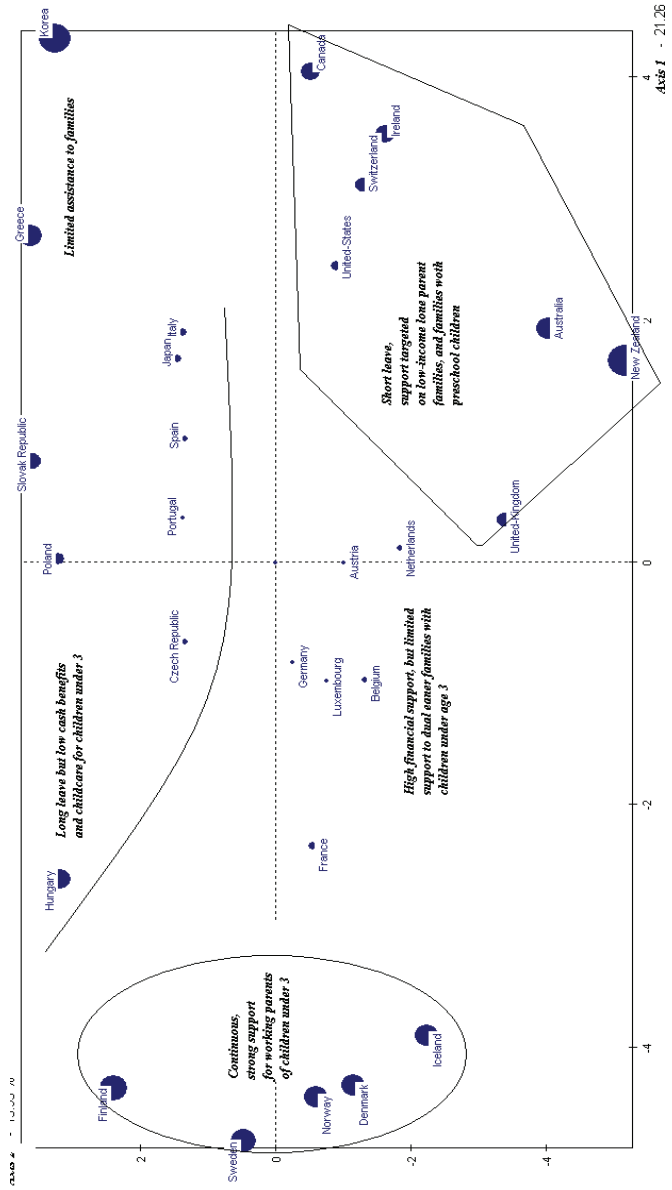
1. *The Nordic countries* (Denmark, Finland, Iceland, Norway and Sweden) stand out for their comprehensive support to working parents with very young children (under 3 years of age);
2. *Anglo-Saxon countries* (Australia, Canada, Ireland, New Zealand, United Kingdom and the United States) where support for working parents with very young children is less comprehensive and spending is higher for older children. In these countries, financial support is also more clearly targeted on low-income and/or large families;
3. A mix of countries from eastern and southern Europe plus, outside Europe, Japan and Korea, where the degree of support is lower, whichever type is considered;
4. Other European countries form a less homogeneous group with a more intermediate position.

[8] OECD, Organisation for Economic Cooperation and Development, has 34 member states, of which 24 are in Europe. It includes mostly the rich societies, although a few countries, including Chile, Mexico, and Turkey, can be defined as middle-income countries. The organisation's official aim is "to help governments foster prosperity and fight poverty through economic growth and financial stability," and to this goal it collects and publishes a vast amount of data, including information on family policies that have been extensively processed in WP2.

Furthermore, WP2 investigated heterogeneity of these groups, identifying many country-specific patterns (Figure 1). Much longer parental leave times in Finland and Norway and lower child care enrolment rates for children below age 3 differentiated them from the other three Nordic countries. UK and New Zealand are set apart from the other Anglo-Saxon countries by higher public spending per child under age three enrolled in child care, as well as on education services. Hungary differed from the other countries in Group 3 in that it provides much more comprehensive support to parents with young children, especially with regard to higher parental leave payments. WP 2 also investigated the three salient contextual dimensions related to key objectives of family policies: poverty, fertility and labour market position of families (which includes a dimension of gender equity).

Considering country groupings by policy regime is important for other reasons than classifying existing policy sets and analysing their changes over time. Existing policies were not established in a vacuum, rather, they were shaped by cultural traditions and prevailing societal norms in a given country and in turn shaped these traditions and norms. It is important to consider whether a particular policy measure lagged behind the broader social change or, in contrast, acted as a forerunner or even a 'trigger' of some behavioural and value changes (Neyer and Andersson 2008). Policies that have a certain effect in one welfare context may not operate in the same way in another one. For instance, offering cheap and high-quality institutional child care for children below the age of three may stimulate higher work participation of mothers and increase their subsequent fertility in countries and among social groups where the prevailing norms accept their labour participation when children are small, but the same measure may fail to have much effect in settings where the prevailing norms stipulate that mothers should stay at home when their children are small (see also WP5 work reported in Section 7.3 and WP6 work in Section 8.1).

Figure 1 Typology of OECD countries by family policies



Source: WP2: Thévenon 2011 ("Family policies in OECD countries: A comparative analysis." *Population and Development Review* 37(1): 57-87).

Important factors in policy-relevant analyses

Summing up the issues discussed in this and the previous section, the following general factors, which may hinder the reaching of clear-cut conclusions about policy effects on reproductive decision-making, should be considered in policy-relevant analyses:

- Many different policies simultaneously affect fertility decisions;
- Most of these policies are not aimed at influencing fertility but motivated by different objectives;
- Policies may be analysed one by one, but it is the combination of policies and their coherence or their conflicting influences that matters for reproductive decisions;
- Stability is an important policy feature, improving the predictability of the consequences of individual reproductive decisions;
- The fertility impact of policies may differ widely by social group, by age and by the number of children already born;
- Also the institutional context, including prevailing norms and attitudes in a country, matters for the way how a particular policy may be accepted and how will it influence reproductive decisions;
- It is important to distinguish short-term and long-term policy effects as well as their influences on the timing and level of fertility;
- Well-designed policies signal that having and rearing children is important and valued, and that parents will be supported in their endeavour.

In REPRO, the analysis of policy packages, discussed further in Section 4, was limited by a lack of information on specific policies and their changes over time in many OECD countries. Future research should in particular address the question of how different work-family reconciliation policies are linked to welfare state regimes. A more detailed analysis of the

rapidly changing policy environment in the former state-socialist countries of central and eastern Europe constitutes another high-priority issue on the future research agenda.

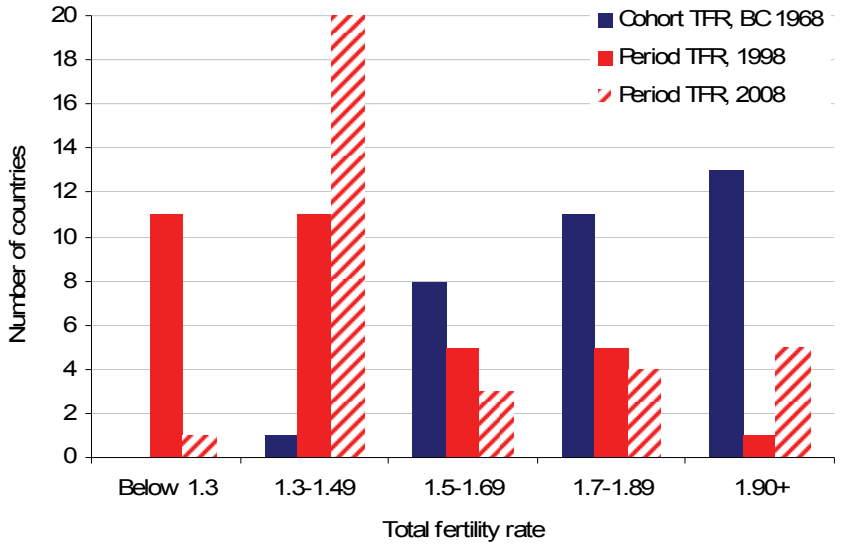
3 FERTILITY TRENDS AND REVERSALS: ECONOMIC DEVELOPMENT AND OTHER INFLUENCES
(Based mostly on WP2 results, coordinated by Olivier Thévenon)[9]

3.1 Cross-country differences in low fertility

It has almost become a cliché, repeated in dozens of documents over the last three decades, that European countries have low and declining fertility rates. Recent evidence as well as the research conducted by REPRO (WP2) paints a somewhat different picture of fertility developments. By any measure, most European countries do have low fertility rates, and some western European countries—most notably Germany—have experienced low or very low fertility since the 1970s. However, period fertility, especially the period Total Fertility Rate (TFR), declined to very low levels in part due to the postponement of childbearing, i.e. a continuing long-term shift towards later childbearing ages, which has negatively affected period fertility rates (Kohler et al. 2002; Sobotka 2004). Meanwhile, completed cohort fertility rates, which are not affected by this effect of childbearing postponement, have also declined in most countries but remained well above the level of the period fertility rates (Figure 2). Whereas only six out of 33 European countries with populations over 1 million had period total fertility rates (TFR) above 1.7 in 1998, as many as 24 recorded a completed fertility rate above 1.7 among the women who were in their prime childbearing years at that period, specifically, the cohort born in 1968.

[9] Luci, A., and O. Thévenon. 2011 "Does economic development drive the fertility rebound in OECD countries?" Working Paper /Document de travail, INED n°167. «http://hal.archivesouvertes.fr/docs/00/52/09/48/PDF/publi_pdf1_dt_167.pdf».
OECD. 2011. "Fertility trends: what have been the main drivers?" Chapter 3 in: *Doing Better for Families*, OECD, Paris.

Figure 2 Distribution of European countries by their period and cohort fertility levels: Period TFR in 1998 and 2008 and completed cohort fertility of women born in 1968



Data sources: Eurostat (2010), VID-IIASA (2010) and Council of Europe (2006)
Notes: Only countries with population over 1 million are included. Turkey, as well as three countries with nonexistent or unreliable data (Albania, Bosnia and Herzegovina and Kosovo) are excluded.

In addition, mostly as a consequence of the 'recovery' of postponed childbearing among women of higher childbearing ages, period fertility rates increased in most of the developed countries in 1998-2008, leading to a reversal of the longstanding trend of declining fertility rates (Goldstein et al. 2009). WP2 illustrated this reversal with an example of the OECD countries, which experienced, with a few exceptions (Luxembourg, the Nordic countries of Europe except Finland and the United States), considerable declines in the period TFR between 1980 and 1995. However, in the subsequent period of 1995-2008, 19 out of 25 European OECD countries recorded an increase in their period TFR. As of 2008, many countries of

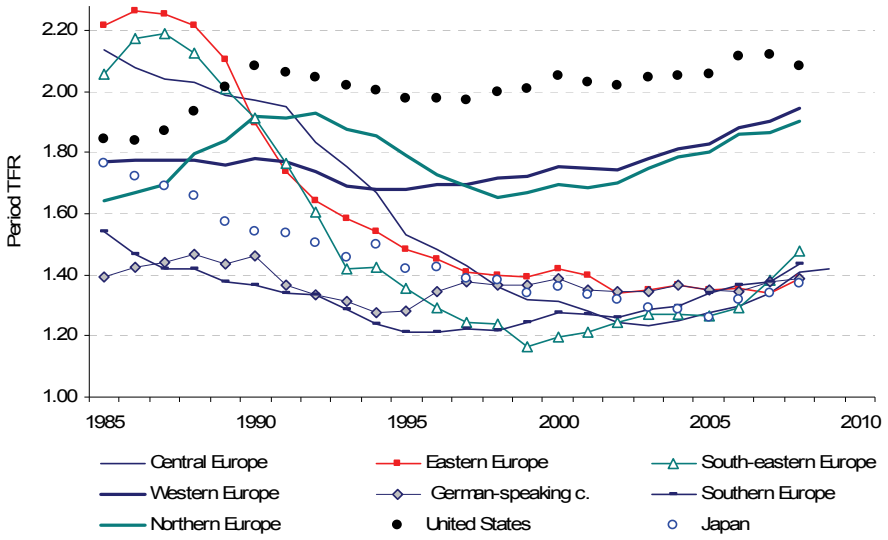
northern and western Europe, including France and the United Kingdom had higher period fertility rates than in the mid-1980s, indicating that the notion of a continuing European-wide fertility decline is no longer valid.

Low fertility in Europe is strongly differentiated by region (WP2, Frejka and Sobotka 2008). A 'higher-fertility' area of Europe, with both period and cohort fertility rates between 1.7 and 2.2 births per woman, includes the United Kingdom, France, Ireland, Belgium, Luxembourg, the Netherlands, and all the Nordic countries, whereas the German-speaking countries, southern Europe and central and eastern Europe (with a few exceptions, such as Albania, Kosovo, Macedonia and Montenegro) have lower fertility rates (Figure 3). Considerable differences in fertility rates among the most developed countries prevail outside Europe as well: Australia, the United States and New Zealand have fertility rates at or slightly above 2 births per woman, comparable to the highest-fertility countries in Europe, whereas the rich countries of East Asia—Japan, Korea and Taiwan—have fertility levels close to the lowest-fertility countries of Europe (see Figure 3 for Japan and the United States).

The new differences in fertility levels between the most affluent countries of Europe, for instance between Germany with a low cohort fertility just below 1.5 births per woman and neighbouring France with a cohort fertility around 2 births per woman is indicative of cultural and policy influences that are worth analysing in detail. In this document, we concentrate especially on the role of seven broader sets of factors: economic development (e.g. Sections 3.2 and 8.2), changing family-related norms (e.g. Sections 3.3, 5, 7.1, 8.1 and 8.2), changing gender norms, attitudes and practices (Sections 6.6, 7.2 and 8.1), changing costs of children (including housing costs that play an important role; Sections 3.4, 5.2 and 5.3), policy influences (Sections 2, 4, 5.7 and 8.1), economic uncertainty, especially unemployment (Section 6.6), and the rapid pace of structural changes in society (Sections 6.2 and 7.3). Many other factors have been discussed in the literature, including compositional effects of populations with respect to higher-fertility migrants and ethnic minorities as well as religiosity (Sobotka

2008; McDonald 2010), and social status polarisation in fertility in countries like the United Kingdom and the United States, where many less educated and socially disadvantaged women show a high and early fertility pattern.

Figure 3 Period total fertility rate in the larger regions of Europe as compared to Japan and the United States, 1985-2008



Data sources: Eurostat (2010), VID-IIASA (2010) and Council of Europe (2006), national data sources.

Notes: Data are weighted by the population size of countries within a given region.

Regional division: *Central Europe*: Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia;

South-eastern Europe: Bulgaria, Macedonia, Montenegro, Romania, Serbia;

Eastern Europe: Belarus, Moldova, Russia, Ukraine;

Western Europe: Belgium, France, Ireland, Luxembourg, the Netherlands, United Kingdom;

German-speaking countries: Austria, Germany, Switzerland.

Southern Europe: Italy, Greece, Portugal, Spain;

Northern Europe: Denmark, Finland, Norway, Sweden.

3.2 Economic development and fertility

(Based mostly on WP2 work by Angela Luci and Olivier Thévenon (2010))[10]

Throughout most of the 20th century, economic development was strongly and negatively correlated with fertility at a national level. A new and widely discussed area of research focuses on the possibility that this relationship has reversed and therefore countries that surpass a certain level of affluence will achieve higher fertility rates. A widely publicised paper by Myrskylä, Kohler and Billari (2009) supported this hypothesis, using the Human Development Index (HDI) constructed by the United Nations.

Within REPRO, WP2 conducted an extensive analysis of the relationship between period fertility rates and GDP level in the OECD countries over time, looking at the period of 1960-2006 (see the detailed account by Luci and Thévenon 2010). As expected, economic development—as captured by an increase in GDP per capita—has a negative impact on period fertility rates when country GDP level is relatively low. However, once societies attain a certain level of economic development, the relationship reverses and economic growth is associated with increased fertility rate. Figure 4, based on Luci and Thévenon (2010), illustrates this inversed-J shaped relationship. The line represents the estimated path linking the total fertility rate to income per capita (logarithmic scale) in 1960-2006. A fixed-effects model is applied to capture the time trend and to control for country effects. In the absence of strong country-specific characteristics, countries are expected to be located close to the predicted line. The turning point for the fertility trend is estimated at the value of GDP per capita around 32,600 US Dollars ($, values are computed in purchasing power parity) when the estimated fertility curve reaches its minimum. This GDP threshold

[10] Luci A., and O. Thévenon. 2011 "Does economic development drive the fertility rebound in OECD countries?" Working Paper /Document de travail, INED n°167. «http://hal.archives-ouvertes.fr/docs/00/52/09/48/PDF/publi_pdf1_dt_167.pdf».
OECD. 2011. "Fertility trends: what have been the main drivers?" Chapter 3 in: *Doing Better for Families*, OECD, Paris.

is higher than the actual OECD average, currently at around 28,000 US$. This threshold also corresponds to a minimum of period total fertility rate at 1.51 children per woman, which is in effect higher than the actual fertility level in many low-fertility countries, and higher than the lowest fertility value achieved in most European countries in the past 20 years.

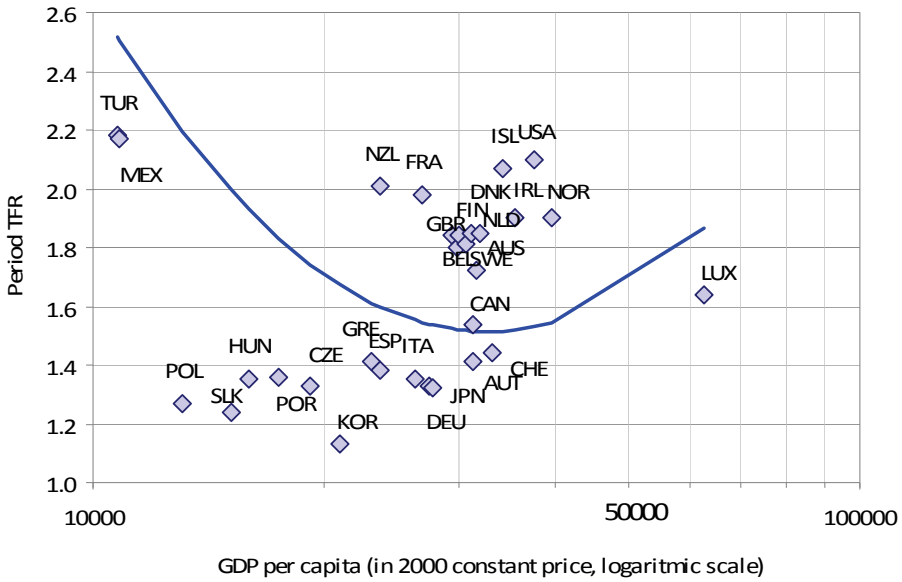
Clearly, fertility trajectories in individual countries often deviate from the predicted pattern, which is also apparent from a comparison of country locations in Figure 4, corresponding to their 2006 levels of GDP and period TFR. Thus, the model should be understood as a simplified representation of reality, where other factors, including family policies, may strongly modify the relationship between economic affluence and fertility (see below). However, the main finding about the reversal of the fertility trend at higher GDP levels is robust and has been supported also when other model specifications have been formulated.

A decomposition of GDP into different components shows that fertility rates co-vary with the increase in female employment rates. This clearly indicates that the increase in GDP per capita at high levels of development actually captures a qualitative change in the organisation of employment and family life. In that context, most of the effect attributed to an increase in economic development actually captures increasing opportunities for women to combine family life employment. Economic advancement in most of the richest countries therefore increases women's labour market opportunities and at the same time has a positive impact on reconciliation possibilities for parents.

These findings lead to the following main conclusions:

- At high GDP levels, further economic development is likely to stimulate an increase of fertility rates;
- Steeper increases in fertility are observed in countries where the opportunities for women to participate in the labour market and to combine work with family have increased.

Figure 4 Association between the period fertility level (TFR, vertical axis) and GDP per capita (logarithmic scale) in 30 OECD countries, 1960-2006



Source: WP2: Luci and Thévenon 2010 ("Does economic development drive the fertility rebound in OECD countries?" *INED Working Paper*, No. 167). and OECD 2011 (Chart 3.4).

Policy implications

Economic development is an important factor that may lead to higher fertility rates in the richest societies. However, this fertility increase is likely to be small if economic development is not accompanied by institutional changes that improve parents' opportunities to combine gainful employment with family life.

3.3 Changing family-related norms and fertility

(Based mostly on WP2 results, coordinated by Olivier Thévenon)[11]

Norms and attitudes related to childbearing exert a strong influence on the formation of fertility intention and may also affect the realisation of intentions (see also Sections 5, 6, 7 and 8.1). Changes in family-related norms, including norms on marriage, gender division of domestic work, mothers' employment and the acceptability of institutional child care for children below age 3, are likely to affect aggregate fertility patterns (Section 8.1). Although norms do not directly determine behaviour, they frame how households resolve conflicting views and deal with economic constraints, and therefore constitute a salient factor influencing fertility (Lesthaeghe and Surkyn 1988).

The shift away from formal marriage to a wider variety of living arrangements, especially unmarried cohabitation, is among the main behavioural and normative changes that have gone on since the 1970s. It is one of the key essential components of the broad concept of family changes, labelled as the second demographic transition (Lesthaeghe 1995, 2010; see also Section 8). In a number of European countries—Bulgaria, Estonia, Iceland, France, Norway and Sweden—as well as in East Germany the majority of births take place outside marriage. WP2 shows that an important reversal took place in the association between marriage and fertility rates: other than in the past, period total fertility rates are now higher in countries with higher rates of extramarital births (WP2, see also Sobotka and Toulemon 2008; Toulemon 2010). In addition, countries showing a significant increase in the period TFR since the mid-1990s (e.g. by 0.2 or more), are among those where the share of extramarital births has rapidly increased. The plausible explanation is that traditional family norms conflict with the new aspirations and prospects of younger generations of men and

[11] Thévenon, O. 2010. "Fertility in OECD countries: An assessment of macro-level trends and policy responses." REPRO deliverable, 12 October 2010, accessible at: <http://www.oeaw.ac.at/vid/repro/assets/docs/Macro-trends.pdf>.

especially women. In societies where a normative view of the importance of marriage and traditional gender roles division remains strong some of the increasingly educated younger women with career aspirations might be discouraged from forming a family (and marrying), as they may be unwilling to conform to these traditional role expectations about motherhood and domestic work (Dalla Zuanna 2001; see also Sections 7.2 and 8.1).

3.4 Costs of children: housing market and the opportunity costs of childbearing

(Based mostly on WP2 results, coordinated by Olivier Thévenon)[12]

The economic and other costs attributable to childrearing are also salient for explaining low fertility rates in many countries (Thévenon 2009). A basic distinction is drawn between the 'direct costs' of children, which include all additional household consumption and expenditures incurred by the presence of children, and 'indirect costs', commonly referred to as 'opportunity costs' of childbearing that refer to time, income and opportunities lost by the parents by allocating a substantial amount of their time to childrearing. Within REPRO, WP2 focused on two important types of costs: housing-related costs and the opportunity costs of children.

Housing costs and the structure of housing market

Housing is the major expenditure, amounting up to 25% or more of the budget of households with children in Germany, Luxembourg, Poland, Spain, Sweden and Slovakia. In 2008, the Eurobarometer survey pointed out that the high costs of housing were among the three most frequent items mentioned by Europeans interviewed about their difficulties in daily life (Eurobarometer 2008). Before the recent economic recession, real housing

[12] Thévenon, O. 2010. "Fertility in OECD countries: An assessment of macro-level trends and policy responses." REPRO deliverable, 12 October 2010, accessible at: <http://www.oeaw.ac.at/vid/repro/assets/docs/Macro-trends.pdf>. OECD. 2011. "Fertility trends: what have been the main drivers?" Chapter 3 in: *Doing Better for Families*, OECD, Paris.

prices had been increasing rapidly in the vast majority of OECD countries (André 2010; Chart 3.7), with an average increase of by 42% between 2000 and the last quarter of 2009 (and much higher in the UK, Spain, France and Spain). The impact of this rise in housing prices on fertility behaviour depends on the structure of the housing market. A key factor is the set of options that households have to adjust their home to an increase in family size. Especially important are the opportunities provided in countries with a large affordable rental sector, which allows young people to make an earlier entry on the housing market. Making home ownership more accessible increases also the range of available lifestyle options (Mulder and Billari 2010). In contrast, widespread home ownership in combination with a strong norm towards home ownership and/or low affordability, or accessibility, of home ownership might restrict couples in forming and realising their fertility plans.

The impact of housing costs and availability on fertility

The variable impact of housing costs, housing affordability and choice can be summarised as follows (see Thévenon 2010: Box 1 for more details).

- A lack of affordable housing can be an important reason to postpone the departure from the parental home, the forming of a partnership and ultimately, becoming a parent (Mulder 2006a; Kulu and Vikat 2007). Couples may delay childbearing or limit their family size in countries where access to high-quality housing is difficult (Krishnan and Krotki 1993).
- The ideal opportunities for having children are found in countries where housing quality is high and where the access to home-ownership or to the rental market is wide.
- In countries with a limited rental sector, home ownership often constitutes a prerequisite for family formation and/or for having another child. However, becoming a home owner can also compete with the cost of additional children (Courgeau and Lelièvre 1992; Mulder 2006b).
- European countries with the highest levels of home ownership (especially in southern Europe, in Italy, Greece and Spain, where the percentage of homeowners is over 75%) and relatively low provision of mortgage loans are also those where family formation is late and fertility levels are low (Mulder 2006; Mulder and Billari 2010).

Opportunity costs of childbearing

The indirect costs that children have for parents are also an important determinant of fertility decision-making. The total earnings gap between mothers and childless women over the entire productive life measures the monetary opportunity costs of having children instead of investing more time in work and career development. The increase in female educational attainment and their vastly improved employment chances have produced a sizeable rise in their opportunity costs of childbearing. This is considered as one of the main causes of fertility decline in developed countries since the early 1970s (Hotz et al. 1997).

Education strongly influences the timing of births, but its impact on family size varies across countries. With some simplification, fertility differences by level of education are larger in countries where social stratification and gender inequalities are comparatively pronounced and where it is difficult to balance family life with work (see also Section 8.3). By contrast, especially in France and in the Nordic countries, higher educational attainment of women is not systematically associated with lower fertility and higher childlessness (Andersson et al. 2009). On the other hand, reproductive polarisation is observed the United Kingdom and to a smaller extent in Germany, where many women decide to remain childless, in particular among the most educated groups (Ekert-Jaffé et al. 2002; Sigle-Rushton 2008). Conversely, many women with low educational degree have a large family size there.

Female employment and fertility

The combination of policy influences, rising educational attainment and rising female labour participation led to a transformation in the relationship between fertility and female employment rates over time (Figure 5). Until the mid-1980s female labour force participation had been very much negatively correlated with fertility rates at an aggregate level. This correlation disappeared altogether by 2006 (Figure 5; see also Engelhardt

and Prskawetz 2004). Instead, two distinct groups of countries have emerged: on the one hand, countries with the highest female employment rates exhibit also the highest fertility rates; on the other, countries like Korea, Italy, Greece, Spain, Japan and Poland show both rather low female employment and low fertility rates.

Figure 5 Female employment rates and the period total fertility rate in the OECD countries, 1980 (left panel) and 2009 (right panel)

Source: WP2: OECD 2011 ("Fertility trends: what have been the main drivers?" Ch. 3 in: *Doing Better for Families,* OECD, Paris); based on OECD Family Database.

The cross-country differences have weakened in part because female employment rates have risen in most of the countries located at the bottom end in the early 1980s. However, the increase in female employment rates has frequently been accompanied by a polarisation of labour supply status by number of children, especially in countries that experienced a sharp decline in fertility rates. Thus, full-time employment is now more closely associated

with childlessness than it was in the early 1990s in Spain, Germany, the Netherlands and Portugal (Thévenon 2009). In contrast, women with dependent children are now more likely to be inactive or in part-time jobs only.

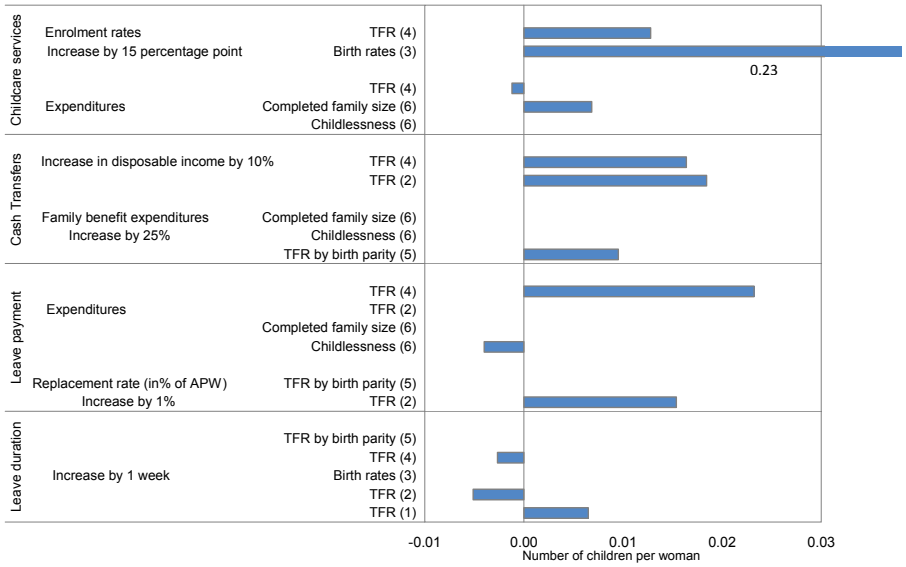
4 POLICY INFLUENCES ON FERTILITY: A REVIEW

(Based mostly on WP2 results, coordinated by Olivier Thévenon)[13]

The predicted curve in the model of fertility and economic development in Figure 4 (Section 3) divided countries into two groups, roughly corresponding to different policy regimes. The divide runs between higher-than-predicted fertility in countries providing comparatively high assistance to working parents with young children and lower fertility in countries characterised by relatively little assistance to families and rather low support for work and family reconciliation. WP2 reviewed contemporary evidence on the effect of policies in the areas of financial support, parental leave and child care on fertility patterns. Here we discuss major findings. The results are quite diverse, but some general conclusions can be drawn. Figure 6 summarises the major results of six cross-country studies conducted since 2004. Cash transfers have a positive effect on the TFR, although they appear to primarily affect the timing of births. The influence of leave entitlements is ambiguous, while the few studies considering the spending and coverage of child care services suggest a positive effect on fertility rates and on completed family size, in particular.

[13] Thévenon, O. 2011, "Family policies in OECD countries: a comparative analysis." *Population and Development Review* 37(1): 57-87; OECD. 2011. "Fertility trends: what have been the main drivers?" Chapter 3 in: Doing Better for Families, OECD, Paris; Thévenon, O. and A. Gauthier. 2011. "Family policies in developed countries: a 'fertility-booster' with side-effects." Forthcoming in *Community, Work and Family*.

Figure 6 The effect of family policies on fertility: a summary of recent comparative studies



Source: WP2: Thévenon 2010 and OECD 2011 (Chart 3.10 in "Fertility trends: what have been the main drivers?" Ch. 3 in: *Doing Better for Families,* OECD, Paris); based on OECD Family Database.

Notes: Column 2 shows the fertility indicator used in a particular study to measure the effect of policies: the period TFR was used in (1) Adsera 2004, (2) D'Addio and d'Ercole 2005 and (4) in Luci and Thévenon 2011; the TFR specified by birth order was used in (5) Gauthier and Hatzius 1997 and the cohort fertility (number of children ever born to women aged 18 to 45) was used by (3) Hilgeman and Butts 2009. Finally, (6) Kalwij 2010 considered the probability to have children and achieved fertility at age 36-40 as a proxy of completed fertility. No results are shown for indicators where the results were not significant. For more details, see Annex Table 3.1 in the final report from WP2 (Thévenon 2010).

Financial transfers: a limited contribution to differences in fertility

There is evidence suggesting that financial transfers such as family allowances—especially when they cover the whole childhood period—have a positive but small and mostly temporary effect on period total fertility rates. Cash benefits are found to marginally affect the TFRs in three recent studies. D'Addio and d'Ercole (2005) and Luci and Thévenon (2011) suggest that an increase of disposable income of families with children by 10% through taxation or benefits system may at most increase the TFR by less than 0.02 births per woman. For France, Laroque and Salanié (2005 and 2008) estimate that financial transfers which generate a 25% reduction in the cost of a child would lead to a modest 5% increase in fertility only. Kalwij (2010) considers most of this positive effect to be spurious and finds no significant effect of public family spending per child on the probability to have children or on completed family size. Benefits primarily targeted at poverty alleviation can, as a side-effect, also raise fertility. For example, the Working Families' Tax Credit (WFTC), introduced in the United Kingdom in 1999, in combination with the increase in Income Support for unemployed families, led to an increase in births of around 15% among beneficiaries with low education and low incomes (Brewer et al. 2003).

Several countries introduced lump-sum grants paid upon the birth of a child. These 'baby bonuses' can reduce abortions in case of unplanned pregnancies and raise intentions to have a child in the near future, especially among the parents. Considered from the perspective of household budgets, baby bonuses obviously have the largest income effect on low-income families. The evidence on their overall effect on fertility patterns is ambiguous and points out at their effects on the timing of births rather than long-term fertility levels (see more details in Thévenon and Gauthier 2010). In addition, 'baby bonuses' appear to be a particularly unstable measure: they are easily introduced, but at least as easily discontinued when governments need to reduce their public spending, as it occurred in Quebec in 1997, in the Czech Republic in 2011, or in Spain in 2010, just three years

after the well-publicised introduction of the scheme, paying EUR 2,500 to the families at the birth of each child.

All in all, much of the effect of financial transfers on fertility concerns the timing of births rather than completed fertility rates. The relatively small effect of cash transfers to families found in a number of studies can be explained by a combination of the following factors:

- Financial transfers do little to reduce the opportunity costs of childrearing, which have increased with rising female labour market aspirations;
- Financial transfers only cover a small part of the direct cost of children;
- Financial transfers can be one-time contributions, such as 'baby bonuses' that do not substantially reduce the cost of children over the life-course.

Reconciling work and family: a possible boost to fertility?

Public and workplace policies aimed at reconciling work and family life may have a significant effect on fertility patterns. Among the different measures, especially maternity and parental leave, formal child care services, and part-time or flexible hours work opportunities have received attention and their overall impact on fertility has been studied.

Duration and payment of parental leave: two parameters that can affect birth timing

The effect of paid and employment-protected leave on fertility is ambiguous. On the one hand, these entitlements support household income and labour market attachment around childbirth, which will have a positive effect on fertility. However, as entitlements are often conditional on employment, they encourage men and women to postpone childbirth until they have established themselves in the labour market, which has a negative effect on overall fertility. This ambiguity is likely to explain the variable results reported for the effect of leave entitlements on fertility rates from

cross-country comparisons. Thus, it is not clear whether the duration of leave entitlements increases or decreases fertility, but in any case its effect is small.

Payment conditions during the leave period can also affect fertility behaviour. Although one would expect a positive effect of payment rates on fertility, the evidence suggests that the effect is small and influences the timing of births rather than completed family size. For instance, Kalwij (2010) found that payment rates affected the progression to first birth but not cohort fertility level: a 10% increase in leave benefits was estimated to generate a 3% reduction in childlessness at age 36-40, but had no effect on the completed cohort fertility (see also Rønsen and Skrede 2008). Some countries allow long periods (up to four years) of home-care leave or child care leave benefits paid at a flat rate. Payment rates are low, much lower than earnings-related parental leave payments but, taken together with other financial transfers they can amount to up to one-third of net average income in Finland (OECD 2005). As with other cash transfers, these payments can have a positive effect on fertility rates, particularly by promoting second and third children, often among low-income families. Furthermore, as home-care leave payments in Finland or Norway are not conditioned on previous employment, they may help stemming the fall of fertility rates during the periods of economic downturns, even supporting a 'countercyclical' fertility trend (Vikat 2004).

Availability of formal child care has a positive effect on fertility intentions

Evidence from cross-country as well as national studies almost invariably points to a positive and significant effect of formal child care availability and enrolment on fertility rates (Luci and Thévenon 2011; Hilgeman and Butts 2009; Rindfuss et al. 2010). Studies in the Nordic countries also find that reductions in the parental fee paid for affordable good-quality child care can have a substantial effect on fertility rates, especially when coverage of child care is widespread (Mörk et al. 2009).

Part-time employment and a more equitable sharing of unpaid work between partners can also contribute to higher birth-rates.

Workplace practices such as long working hours and working weeks make it harder to match work and care commitments and negatively affect fertility rates (Luci and Thévenon 2011). By contrast, part-time employment opportunities have a positive effect on fertility rates in OECD countries, especially among women with a higher level of education (D'Addio and D'Ercole 2005; Del Boca et al. 2009). However these results are not always replicated in other studies (e.g. Hilgeman and Butts 2009), and are likely to be country-specific. Rather than the length of working time being important, Mills et al. 2008 suggest that control over working time strengthens intentions to have children in European countries. Also father's involvement in caring for the first child matters: emerging evidence from the Nordic countries suggests that it brings forward the birth of the second child (e.g. Duvander et al. 2008; Lappegård 2009).

Policy implications

Policies remain diverse across Europe and OECD countries despite the fact that most countries have increased their support to families. The main differences remain with respect to the support for working parents with children under age 3 and the extent to which parental leave entitlements and provision of child care services complement each other (Thévenon 2011). The fertility impact of different policies is typically modest, and concerns mostly the timing of childbearing, as well-designed policies may allow couples realising their childbearing plans earlier. This timing impact is not necessarily unimportant (Rindfuss and Brauner-Otto 2008): it may help halting the ongoing processes of childbearing postponement (Lutz and Skirbekk 2005), allow more couples having children before the age when they may face infertility problems, temporarily increasing the number of births in a country and thus also the cohort size of new generations.

5 FORMATION OF FERTILITY INTENTIONS

(Based mostly on WP 3 report, coordinated by Jane Klobas (2010))[14]

Studying reproductive intentions and their formation is paramount for understanding contemporary fertility patterns and identifying factors that influence them. A large share of realised fertility in Europe can be classified as planned, intentional and resulting from 'reasoned action'. Ignoring a significant proportion of births that still occur 'unplanned' and are outside the scope of the reasoned action / TPB perspective, Schoen et al. (1999: 799) aptly suggested that: "…fertility is purposive behaviour that is based on intentions, integrated into the life course and modified when unexpected developments occur. (…) For a better understanding what drives fertility more research is needed on both intentions and their determinants." A strong motivation for this research is also provided by a frequent notion of *fertility gap*, or an aggregate mismatch between generally higher reproductive intentions and lower actual fertility rates in Europe, repeatedly stressed in various official documents concerned with demographic situation (Section 1). Work Package 3 investigated from a social psychological point of view how individuals form intentions to have children.

[14] Klobas, J. 2010. "Social psychological influences on fertility intentions: a study of eight countries in different social, economic and policy contexts." REPRO-Deliverable 3.8. See also Dommermuth, L., J. Klobas, and T. Lappegård. 2011. "Now or later? The theory of planned behaviour and fertility intentions." *Advances in Life Course Research*, *16*(1), 42-53; Ajzen, I. and J. Klobas. "Fertility intentions: A theory of planned behavior perspective," in Erhardt, J.and M. Kohli (Eds). *Theoretical Foundations for the Analysis of Fertility*, special issue of *Population and Development Review*, submitted; Klobas, J. "Making the decision to have a child." In: D. Philipov, A. Liefbroer, and J. Klobas (Eds). *Reproductive Decision-making in a Macro-Micro Environment*. Amsterdam: Springer, in preparation; Klobas, J. "Using the theory of planned behavior as measured in the Generations and Gender Survey to study life course decision making," in preparation for special issue of *Demographic Research*; Philipov, D., O. Thévenon, J. Koblas, L. Bernardi, and A. Liefbroer. 2009. "Reproductive decision-making in a macro-micro perspective (REPRO): State-of-the-art review." *European Demographic Research Paper* 1-2009, Vienna Institute of Demography.

Although not initially planned, WP3 also explored possible macro level explanations of cross-country differences in the effects of attitudes, subjective norms and perceived behavioural control on fertility intentions. Individuals' beliefs about having children (micro-level evaluations) and the effects of these beliefs on intentions to have a first or a second birth were linked to external (macro level) conditions prevailing in different countries. This analysis used harmonised survey data for eight countries (Bulgaria, Russia, Georgia, Germany, France, Hungary, Italy and Romania). In particular, three important aggregate-level explanations of cross-country differences in intentions formation were studied: employment instability, housing costs and family- and child-friendly policy.

5.1 Intention formation: The *Theory of Planned Behaviour* framework

The REPRO project adopted the *Theory of Planned Behaviour* (TPB) as its unifying framework (Ajzen 1991). In the TPB framework, human behaviour is modelled as an outcome of reflective decisions, which are characterised as *intentions*. Intentions are formed through cognitive and emotive processes which lead to three kinds of evaluations, which are commonly described as

- *Attitude* to the behaviour (people's internal evaluations that performing the behaviour will have a positive or negative outcome for them);
- *Perceived norm* (perception of external social pressures for performing the behaviour);
- *Perceived behavioural control* (PBC, people's perceptions that they are able to perform the behaviour).

More detailed description and a scheme of the TPB framework are provided in Appendix 2.

Of particular importance for REPRO research, the TPB may also explain how aggregate-level conditions influence the evaluation system, intention and behaviour. According to the model, intention is a *readiness* to

act, which may be transformed into actual behaviours when conditions permit. PBC reflects in part a person's evaluation of whether those external conditions will permit them to take action.

5.2 Data and countries

Data used for the analysis of the formation of fertility intentions in WP3 (Klobas 2010) were drawn from the Generations and Gender Survey (GGS), an international panel survey concerned with family and fertility patterns and as well as intergenerational relations and the factors that influence them. WP3 analysis included female respondents of reproductive age (18-49) and male respondents with female partners of reproductive age. Key individual-level characteristics considered were age, parity (number of children respondent has had so far), achieved level of education and partnership status. Separate analyses have been conducted for women and men. An inclusion of data for eight countries—Bulgaria, France, Georgia, Germany, Hungary, Italy, Romania and Russia—allowed an exploration of three possible aggregate-level explanations of differences: employment stability, housing costs and a family- and child-friendly policy. The GGS enables measurement of items that encompass the main tenets of the theory of planned behaviour: intention, attitude, as well as perceived norm to having a(nother) child within the next three years and, with some limitations, the perceived control over factors that might influence ability to have a(nother) child and to raise that child.

5.3 Believes, attitudes, perceived norms and perceived control

Structural equation modelling (SEM) was used to identify a set of normative beliefs, and two sets of behavioural beliefs: beliefs about the *costs* of having a child ("what may be lost") and beliefs about the *benefits* of having a child ("what may be gained") on personal satisfaction. Furthermore, three sets of control factors that might affect the decision to have a child were identified: material factors such as finances and housing,

factors associated with child care and care leave, and personal control factors including health and having a suitable partner. Table A2 in Appendix 3 lists the beliefs associated with each of these aspects of the decision to have a(nother) child. To keep the analysis reasonably focused, work by Klobas (2010) in WP3 concentrated on childless respondents and respondents with one child aged 25-34. At that age the highest share of respondents, around one fifth, intended to have a child within three years and country-level differences in intentions were larger than among the younger respondents.

Not surprisingly, having a child is expected to be a costly endeavour, both financially and with respect to the opportunity costs: Women in all countries except France and Italy expected to be worse off financially and in terms of their work situation. Males also expected to be somewhat worse off in terms of freedom; in Bulgaria, Russia, Germany and Romania, where childless men expected that having a child would have a negative impact on their ability to do what they want. On the positive side, respondents in all countries except Germany believed that having a child would increase satisfaction and certainty in their lives; childless respondents tended to have stronger expectations than those who already had a child.

The relevance of control factors varied more markedly across countries and contexts, although some patterns were observed. In particular, housing conditions were considered relatively important. Different beliefs were salient for the decision to have a first and a second child. The decision to have one's second child is cognitively more complex and involving more factors. Normative beliefs matter more for the decision to have a first child in all countries. With the exception of France, and to a lesser extent Romania, more control factors were salient for respondents with one child than for childless respondents.

5.4 Forming an intention to have a child

Parity and age turned out to be the most important sources of variance in intention across the whole sample (49,393 individuals from eight

countries). In contrast, differences in country, gender, education and partnership status explained relatively little variance. Different sets of factors influence intention to have a child among the childless respondents and among parents and among the younger (below age 25) persons and the persons of prime childbearing ages. As the analysis focused primarily on women aged 25-34, the effect of age was investigated only for women in Bulgaria. While perceived norms had a significant effect for both groups studied (aged below 25 and 25-34), beliefs about freedom were more salient and significant among the younger women. For the 'older' women, earlier concerns about loss of freedom appear to be replaced by concerns about material ability to have a child and the availability of child care and support for rearing the child.

Intention to have one's first child was most strongly influenced by expected satisfaction in five countries. Perceived normative influences had a significant effect in five countries (not in Russia, France or Hungary). These results are notable because they indicate that country-level differences in beliefs about the impact of having a child on one's financial situation and work, and in beliefs about the importance of one's financial situation, work and housing conditions, have no effect on the actual decision to have a child. What matters most to these 25 to 34-year-old women is that having a child will bring satisfaction, a sense of certainty and a sense of security.

The effects of attitudes, perceived norms and perceived control on intention to have one's second child differed from their effects on the decision to become a parent in all countries except Hungary. More factors entered into the decision to have a second child than the decision to have the first child—a further confirmation that the decision to have a second child is cognitively more complex. At the same time, differences between countries were also more marked.

Policy implications

National contexts matter and therefore any policy should at least be logically 'tested' against its relevance for the different national and family

contexts in which it is to be applied. Different actions should be aimed at easing the transition to having a second child than having one's first child; specific actions should be directed at improving access to child care in different forms in various individual and national contexts, and so on.

5.5 The analysis of short-term and medium-term intentions

(Based on WP 3 study conducted by Lars Dommermuth, Jane Klobas and Trude Lappegård (2011))[15]

As a part of WP3, Lars Dommermuth, Jane Klobas and Trude Lappegård (2011) used data from the Norwegian Generations and Gender Survey, conducted in 2007, to analyse factors accounting for the differences between medium-term (within three years) and short-term fertility intentions (intending to have a child 'now'). The sample was restricted to respondents aged 18-40 with at least a medium-term fertility intention. Norway represents a country with a comparatively high fertility level, where parents face—due to generous family, welfare and gender equality policies—a relatively low cost of having children.

Factor analyses based on 23 questions and built in accordance to the theory of planned behaviour revealed four groups of factors: one measuring perceived behavioural control, one capturing the impact of subjective norms and two measuring attitudes toward the behaviour (divided into positive and negative outcomes).

Subjective norms and perceived behavioural control explain differences in the timing intentions of both parents and the childless. Thus, the stronger the influence of 'significant others' for having a child, the more

[15] Dommermuth, L., J. Klobas, and T. Lappegård. 2011. "Now or later? The Theory of Planned Behavior and timing of fertility intentions." Advances in Life Course Research 16 (1): 42-53. An earlier version was published as a working paper: Dommermuth, L., J. Klobas, and T. Lappegård. 2009. "Now or later? The Theory of Planned Behaviour and fertility intentions." Dondena Working Papers No. 20, Carlo F. Dondena Centre for Research on Social Dynamics, Milano, Italy. «http://www.oeaw.ac.at/vid/repro/assets/docs/Dondena_WP20.pdf».

likely people are to intend to have a child in the short-term. In addition, a stronger sense of control over the costs and constraints of having a child is also associated with short-term intentions. Perceptions of behavioural control reflected the actual situations of the Norwegian respondents, indicating the importance of constraints, even in 'low-cost of children' contexts. Additionally, for parents, a stronger positive view of the consequences or the benefits of having another child leads to short-term intentions.[16] These results are significant because short-term intentions are more likely than longer-term intentions to result in childbearing.

Policy implications

Even in strong policy contexts, the perception that constraints are difficult to overcome can deter childless individuals from acting in the short-term on their intentions to have another child if their intentions are not immediate or strong.

5.6 Couples' fertility intention: An analysis using the theory of planned behaviour

(Based mostly on WP 3 study conducted by Jane Klobas, Dimiter Philipov and Marta Marzi (2010))[17]

Previous research has shown that agreement or disagreement within couples has a strong bearing on the realisation of fertility intentions (Thomson 1997; Thomson and Hoem 1998; Rosina and Testa 2009). One WP3 deliverable (Jane Klobas, Dimiter Philipov and Marta Marzi 2010) aimed to explain differences between couples based on the joint intentions of

[16] Negative views about the consequences of having a child did not differentiate between short- and medium-term intentions, probably because strong negative views result in a decision not to have a child at all.

[17] Klobas, J., D. Philipov, and M. Marzi. 2010. "How attitudes, perceived norms and perceived control influence couples' decisions to have a child." REPRO-Deliverable 3.9. See also Klobas, J. and M. Marzi. "How attitudes, perceived norms and perceived control influence Italian couples' decisions to have a second child." Dondena Working Paper, under revision.

the man and woman to have a second child within three years, using the theory of planned behaviour as a framework. This study used household survey data for Bulgaria and Italy. It has shown that models of fertility decision-making at the couple level can improve understanding of fertility intentions, and that the concepts included in the theory of planned behaviour—attitudes, subjective norms and perceived behavioural control—add considerable additional insight into couples' agreement about intentions to have a child. Because they also help to explain the difference between agreement to have a child and disagreement (which, for many couples, leads to not having a child) they improve our understanding of fertility decision making.

Women's attitudes to both the costs and benefits of having a child have the strongest effect on agreement to have another child rather than disagreement, while both men's and women's expectations that their lives will be improved by having another child, along with men's perceptions of control are associated with disagreement rather than agreement not to have another child. The results for Italy and Bulgaria are complementary. In both countries, a limited number of demographic characteristics explained differences in couples' intentions, woman's age being the strongest of them. Religiosity is an important factor in both countries, where couples in which the woman is strongly religious are more likely to intend to have another child than intend not to have another child. In Bulgaria, where data were available to measure the effects of income and dwelling size, both these variables distinguished couples who agreed to have another child from those with differing intentions, and higher education was associated with greater agreement to have another child.

The social psychological variables had similar effects in both countries. In Italy, the perceived support of the couple's mothers has a strong effect on agreement to have a second child by affecting both males' and females' attitudes to the positive effects of having a child and by additionally affecting a woman's expectations of negative outcomes and perceived control (her perception that she has her mother's support leads to less

expectation of negative outcomes and greater sense of control). It seems a combination of psychological and actual support is being provided by the decision-makers' mothers. In Bulgaria, positive attitudes of both a man and a woman are associated with couples' agreement to have a child, but agreement is less likely when the man has lower perceived behavioural control.

Policy implications

- *The psychological effect of mothers' support on positive intention in Italy, where government family support is low, may be having a similar effect to policy in other countries, i.e. it contributes to the "material and emotional environment" in which couples can focus more on the benefits of having a child than on the difficulties. While policy is unlikely to replace the psychological effect of grandmothers' support on the expected outcomes of having a child, these observations support other research that underlines the importance of policies that enable access to child care. They do not, however, inform debates about the relative value of public child care and support for family-provided child care in different contexts.*
- *Couples without (grand)mothers would need particular attention if policy emphasised support for grandparents' child care. They also underline the psychological importance of (grand)mothers' approval, suggesting that institutional interventions should sustain, if not strengthen, conditions that support three generations, child, parents and grandparents.*
- *In the attempt to improve the perceived behavioural control and positive attitudes to having a child of women, policies should not ignore men, or the couple as a decision-making unit.*

5.7 Aggregate-level context and policy implications

(Based mostly on WP 3 study coordinated by Jane Klobas (2010))[18]

Formation of intention to have a child appears to differ in quite complex ways across different individual and national contexts. Grouping by policy context (defined as the percentage of GDP spent on family- and child-friendly policy) explained more variance than differences in employment stability or wealth in the intention to have a second child among women aged 25-34 with one child.

This suggests that explanations based on differences in policy support provide a more complete picture of differences in the formation of intention to have a child and, in turn, that policy interventions are likely to make a difference for women in this age group. Where family policy expenditure is higher (3% to 3.8% of GDP), intentions were affected only by positive attitudes and subjective norms, while where family policy is less generous (around 1% of GDP), intentions were also affected by expected negative outcomes and perceived behavioural control (PBC). This difference is further underlined by the observation that PBC was high in countries where expenditure is higher and low in countries where expenditure is lower.

But, there is a paradox. While PBC is higher in countries that spend more on family policy, material control and access to child care had no observable influence on intention to have a child in either policy context. On the other hand, the factors that had a stronger influence on fertility intentions in stronger policy contexts are not those that respond to policy: stronger expectations that having a child will have positive outcomes and stronger perceived normative influences.

[18] Klobas, J. 2010. "Social psychological influences on fertility intentions: a study of eight countries in different social, economic and policy contexts." REPRO-Deliverable 3.8.

Policy implications

Institutional investments in child- and family-friendly actions appear to support the decision to have a child by providing women with an environment in which they do not need to consider the negative consequences or constraints associated with having a child; instead, they are free to focus on the positive consequences and the social norms for childbearing.

The influence of social norms is further underlined by comparing Germany with France and Hungary, the two other countries in the sample with relatively high expenditure on family- and child-friendly initiatives. Although higher than in the low-expenditure countries, intention in Germany was much lower than in France or Hungary. Germany differs markedly from these countries in that subjective norm tends toward *not* having a second child.

Policy implications

These results further support the interpretation that policy plays an important psychological role in signalling that having and rearing children is important and valued, and that parents will be supported in their endeavour. It might even further suggest that the precise details (within boundaries) of policies may be less important than the existence of policies and institutional support that can be seen *to have a beneficiary effect for the society as a whole. Such a conclusion would affirm the approach to policy taken by most countries with relatively high levels of expenditure on family- and child-friendly policy, aimed primarily at permitting a balance between work and family, but with variations that reflect national context.*

6 FROM INTENTIONS TO BEHAVIOUR

Work in WP4 investigated different aspects of the relation between childbearing intention and behaviour, including an exploration of the factors influencing the realisation of intentions, life course changes in fertility intentions and their determinants, as well as the influence of labour market uncertainty. The analysis was performed for different institutional contexts, involving researchers from five countries who studied detailed longitudinal survey data from Bulgaria, Hungary, France, the Netherlands, Switzerland and the United Kingdom. Four datasets, the Bulgarian Social Capital Survey, the Dutch Netherlands Kinship Panel Survey, the Hungarian GGS (*Turning Points of the Life Course*) and the Swiss Household Panel survey could be harmonised and allowed a comparative analysis of a merged dataset. As WP4 was primarily concerned about the individual-level behaviour, it provided a micro-level analysis of a discordance between fertility intentions and subsequent behaviour, which greatly contributed to the understanding of the macro-level 'gap' between them, which is frequently emphasised as one of the main reasons for low fertility in Europe (see Section 1).

6.1 Intentions and subsequent behaviour: realisation, postponement and abandonment

(WP4 work by Zsolt Spéder and Balázs Kapitány (2010))[19]

The WP4 study conducted by Zsolt Spéder and Balázs Kapitány (2010) analysed data for Bulgaria, Hungary, the Netherlands and Switzerland to investigate whether realisation of short-term fertility intentions follows the same pattern in different societal contexts.

[19] Spéder, Z. and B. Kapitány. 2009. "Differing patterns of birth intention realisation: looking into the postponement 'black-box'." Chapter 2 in: Z .Spéder (ed.) *A summary of all findings in Work Package 4*. REPRO-Deliverable, pp. 21-51. <http://www.oeaw.ac.at/vid/repro/assets/docs/Summary_Realization.pdf.>
Kapitány, B. and Z. Spéder. 2009. "Realisation, postponement and abandonment." Chapter 3 in: Z .Spéder (ed.) *A summary of all findings in Work Package 4*. REPRO-Deliverable, pp. 52-75.

Specifically, the study analysed whether respondents who intended to have a child in the next two years managed to realise this intention within a three-year period (the difference of one year allows for some mismatch between intentions and behaviour due to the prolonged 'waiting time' to pregnancy that is common among many couples (Evers 2002). A simple categorisation of respondents intending to have a child is shown in Table 1. Apart from a group of people who managed to realise their intention (Intentional parents), two broad groups of 'non-realisers' are distinguished: Postponers did not realise their intention within the given time horizon but still retained it after those three years, while Abandoners did not realise their initial intention and no longer planned to have a child when asked three years later.

Table 1 Categories of respondents who intended to have a child by realisation of their intention

Fertility intention - outcome typology	Fertility intention within two years (at Wave 1)	Had a birth within three years (between Waves 1 and 2)	Intend to have a child at a subsequent (3rd) wave
Intentional parents	Yes	Yes	
Postponers	Yes	No	Yes
Abandoners	Yes	No	No

Source: WP4, Spéder and Kapitány 2010, Table 3

Such general notions of 'postponement' vs. 'abandonment' in the realisation of intentions are closely related to the concept of 'fertility postponement', which has become paramount for explaining fertility change in contemporary Europe (Kohler et al. 2002). Although fertility postponement does not have a clear delineation and often serves as a label for different phenomena (Ní Bhrolcháin and Toulemon 2005), in a broadest sense it usually denotes the aggregate shift towards a later timing of childbearing, either during a specified period of time, or among selected cohorts (Kohler et al. 2002; Billari et al. 2006; Sobotka 2004; Goldstein et al. 2009). As the term 'postponement' suggests, at last some of the

presumably ‘postponed’ births have to be realised later in life; such compensatory increases in fertility at higher childbearing ages have been labelled as ‘recuperation.’ The strength of this ‘recuperation’ is seen by Lesthaeghe (2000) as a critical determinant of cross-country differences infertility, with the countries with lowest recuperation usually positioned on the tail of the European fertility ranking.

While these concepts of ‘postponement ‘and ‘recuperation’ are commonly captured by macro-level indicators such as the rise in the mean age at first birth, they lack precise definition as well as an underlying micro-level elaboration (see also Ní Bhrolcháin and Toulemon 2005). The latter point is also emphasised in REPRO studies by Spéder and Kapitány, who view the trend towards childbearing postponement as an aggregate outcome of individual behaviour and emphasise the micro-level foundation of this phenomenon.

The link between intentions and behaviour is not straightforward. There are many conceptual and measurement inconsistencies. To start with, due to obvious limitations, the surveys used in the REPRO project measure the outcome of a ‘proceptive behaviour’—a childbirth—rather than the ‘proceptive behaviour’ itself (having sexual intercourse, not using contraception, undergoing infertility treatment), which is the closest behavioural manifestation of acting or not acting on stated birth intentions. Past research has also shown that revisions of birth intentions are common, in part because many people have other goals competing with their reproductive plans (Morgan 2010). The work reported here looked at the intention change just in two points in life and could not identify many of the competing goals at play in the decision-making of individual women and men. Ajzen (1988) also mentions a number of internal and external factors that may cause a change in intention: emotions, changing opportunity structures, dependence on others (in particular, on a partner), unforeseen life-course events, which could only to a limited extent be addressed with the surveys analysed in WP4.

Fertility intentions: salient factors

A review of the past research on the relationship between fertility intentions and fertility highlights the salience of the following factors:

- The *timeframe* of intention (short-term intentions are often expressed with higher certainty);
- *Certainty*: how well-defined and certain intentions are (uncertainty and ambiguity are common and inherent features of the reproductive decision-making process (Morgan 1982);
- *Biological and health factors* which directly intervene into individuals' plans and efforts to realise them;
- *Intention of the partner*: agreement or disagreement between partners strongly influences intention realisation (Miller and Pasta 1995; Thomson 1999; see also Section 5.6 above);
- *Demographic* (especially age, sex and parity) and *social group characteristics*;
- Occurrence of unexpected *life events*;
- *Time and context*: historical and institutional context, including culture, norms and policies.

Finally, it is important to note a special position of the 'negative intentions' (i.e. intentions not to have a child). In the developed world, they are always realised with higher probability than the 'positive intentions'. In other words, intentions not to have a birth (or to use contraceptives) predict the non-birth of a child better than child birth intentions predict childbearing (Westoff and Ryder 1977; Rindfuss et al. 1988; Philipov 2009). At the same time, people may also increase their intended family size upwards and the research by Iacovou and Tavares, conducted in WP4, clearly shows that such upward revisions are frequent (Section 6.4). In addition, even in contemporary Europe a significant number of women become pregnant unintentionally—especially in eastern Europe (CDC 2003)—and some of them give birth to an unwanted or 'mistimed' child, slightly increasing the

fertility level in a country. This effect of reaching unintentionally a larger family size, which partly counterbalances the frequently discussed 'fertility gap', has been investigated in WP4 with Hungarian data (Spéder 2009, Section 6.5).

6.2 Cross-country differences in birth intentions realisation

(Based on WP4 work by Zsolt Spéder and Balázs Kapitány (2010))[20]

Wide differences between countries were also found for the success or failure to realise childbearing intentions within specific population groups. Table 2 shows that for respondents living in a partnership (marriage or cohabitation), as many as 77% of the Dutch men and women, but fewer than one-half of Bulgarians (45%) and Hungarians (46%) managed to have an intended birth within a three-year 'follow-up' period. In these two countries, one-third of the respondents could be classified as Postponers, while more than one-fifth abandoned their intention between the two waves of the survey.

Table 2 Realisation within 3 years of short-term (<2 years) fertility intentions among people in union (marriage and cohabitation) in the four analysed countries.

Fertility Outcomes	Country		
	Netherlands	Switzerland	Hungary
Intentional parents	75	55	40
Postponers	15	27	42
Abandoners	11	18	18

Source: WP4, Spéder and Kapitány 2010, Table 3

[20] Spéder, Z. and B. Kapitány. 2009. "The realization of time-related fertility intentions. A comparison of the Netherlands, Switzerland and Hungary." In: Z. Spéder (ed.) Country specific analyses for other countries. REPRO-Deliverable 4.11, pp. 7-26.

The low rate of realisation of fertility intentions in the two analysed post-communist countries suggests that some historical, cultural or structural features of these societies make it more difficult for many people to fulfil their intentions. Spéder and Kapitány argue that the pace of social change in the former communist countries, and the unparalleled change of the cultural system and institutional structures in these countries, could be responsible for the observed weak relationship between intentions and behaviour. Two sets of explanations are proposed. First, ideas about family formation and social schemes about the timing of parenthood (which was 'very young' during the period of state socialism before 1990) change only gradually. The slowly changing normative system of childbearing has coexisted with rapidly changing societal conditions. This involved many uncertainties and resulted in a high rate of postponement and abandonment of fertility intentions (see also Section 7.3). A complementary interpretation can be based on Neugarten's concept of 'unrealistic optimism' (Neugarten et al. 1961; see also Weinstein 1980). Individuals can be unrealistically optimistic in their intentions if they overestimate the degree of control they have over their fertility behaviour. Further research is needed to identify what barriers people underestimate, and what conditions they judge too optimistically when formulating their fertility intentions.

Spéder and Kapitány shed new light on the concept of childbearing postponement. Often there is the indirect assumption that the aggregate postponement occurred because many people intended to have a child later in their life—e.g. because they wanted to complete their education first, secure a stable job, acquire an apartment, or because the transformation opened new opportunities and the like. If this assumption was right, the 'ageing of fertility' would be a consequence of individually planned behaviour. However, another kind of causality is plausible as well: postponement of fertility results from a failure to realise one's childbearing intention. Aggregate-level postponement is thus to a large extent the consequence of involuntary postponement. This causal connection could be

an important element of the 'behavioural understanding of the postponement' (Ní Bhrolcháin and Toulemon 2005).

Policy implications

- *Unexpected and rapid social change could be an important reason for the high rate of failure to realise short-term fertility intentions in the formerly state-socialist countries. An effective family policy should be predictable and stable, which will decrease the structural uncertainty emerging from rapid changes in the society, including policy programs.*
- *The observed wide differences between countries in the share of women and men not realising their childbearing intentions suggest country-specific policy implications, in line with the research reported in WP3* (Section 5 above).

6.3 Determinants of successful realisation of fertility intentions

(Based on WP4 work coordinated by Balázs Kapitány and Zsolt Spéder (2010))[21]

Using identical sets of harmonised longitudinal data for four countries as in the work reported above, Balázs Kapitány and Zsolt Spéder studied which factors contribute to or hinder the realisation of fertility intentions regarding the first and the second birth. As in the preceding study, intentions, as measured in one survey wave, are formulated for the next two years, while their realisation is measured at another wave three years later. The underlying argument is that certain social and demographic positions can create favourable or unfavourable circumstances for the realisation of childbearing intentions. Table 3 summarises major findings, based on a multinomial regression model. The results are presented as odds ratios of either being in the Postponer category (as opposed to the Intentional parent)

[21] Kapitány, B. and Z. Spéder. 2009. "Realisation, postponement and abandonment." Chapter 3 in: Z. Spéder (ed.) *A summary of all findings in Work Package 4*. REPRO-Deliverable, pp. 52-75.

or being in the Abandoner category (again as contrasted to the Intentional parent; see Section 6.2 for the definition of these categories).

Table 3 Realisation of short-term fertility intentions in four countries: Odds ratio of being a *Postponer* or an *Abandoner* (multinomial regression model)

	Postponers[a]			Abandoners		
	Hungary	Netherlands	Switzerland	Hungary	Netherlands	Switzerland
Age	1.111***	.987	1.092***	1.305***	1.297***	1.074**
Male	.890	1.556	1.059	.471***	3.616***	.822
Parity1	.663**	.349***	.138***	3.592***	1.640	.221***
Parity2+	.383***	.500	.252***	5.250***	2.958**	.521
Cohab at wave I	1.249	1.553	.620	.954	1.307	.400*
Alone at wave I	4.009***	2.311	4.234***	3.441***	2.630	5.939***
Education	.945*	.948	.999	.844***	.817***	.978
Job	1.149	.691	.811	1.109	1.479	1.661
Calvinist	1.176	3.377*	1.390	.880	.910	.829
Other religion	.848	5.602**	4.013***	.416**	.612	.774
No religion	1.433**	2.714*	1.345	.992	.942	1.756
Chi-Square:		109	103			
Df:	22	22	22			
Nagelk.R^2.	0.37	0.26	0.27			
N:	1069	458	408			

Source: WP4, Kapitány and Spéder 2009, Table 4
Notes: *: The reference category 'intentional parents' are those who successfully realised their two-years intentions within three years.
**: In the case of Bulgaria, the reference category is 'Christian Orthodox'.

There were not many notable country-specific findings. Parity differences in intention realisation between countries suggest that (initially) unintended childlessness is quite common in Switzerland, while many families in Bulgaria relinquish their intentions to have a second child.

Among the factors analysed, age, sex, parity, partnership status and education had a strong bearing on the realisation of childbearing intentions. Those who failed to realise their intention within three years are older than those who succeeded. This result supports the 'biological clock' argument, namely the importance of an age-related increase in infertility which

prevents some couples from achieving a pregnancy and carrying it to term. However, lifestyle factors may play an important role as well: for instance, some men and women may 'accommodate' to their childlessness status to the point of becoming reluctant to realise their earlier intentions. The term 'perpetual postponement' (Berrington 2004) characterises this situation best.

Except in Bulgaria childless people have a higher risk than parents to become *Postponers* rather than realising their childbearing intention 'on time'. This confirms the assumption that conflicting life goals prevent the realisation of birth intentions especially among those without children (Rindfuss et al. 1988; Barber 2001). In contrast, parents are more likely than the childless to abandon their childbearing intention (except in Switzerland), especially when they already have two children. Partnership is in all the four analysed countries a strong prerequisite to the realisation of fertility intentions (see also Schoen et al. 1999; Philipov and Testa 2007) and hence people living without partner at Wave 1 are much more likely to postpone or relinquish their childbearing intention. Separation also hinders the realisation of fertility intentions in both directions, i.e. towards postponement as well as abandonment. However, there was no significant difference in the realisation of a two-year birth intention between cohabiting and married couples. Education influences the rate of intention abandonment as contrasted to the 'successful realisation' of intentions. At the same time, there are contradictory results regarding the impact of education on the postponement of birth intentions. Other indicators, namely economic activity and religious denomination, did not yield consistent and significant results. However, values, attitudes and psychological traits that might be important for the 'on-time' realisation of fertility intentions, such as the general perception of life, a perceived anomie in the social system, or one's partnership quality, could not be studied with the data at hand.

Policy implications

- *Governments in countries with a very high proportion of people who unintentionally postpone their family formation should pay attention*

to this issue and consider adjusting their family policies to better cater to these people.

- *Stable co-residential union is a prerequisite for the realisation of fertility intentions. People who intend to have a child without a partner they live with (e.g. those having a 'living apart together' relationship, or still living with their parents without a common dwelling) have a much lower chance of realising their intentions. Regulations of the housing market that support younger people in acquiring and keeping a stable dwelling are of key importance. For example, in Hungary many young couples who intend to have a child live in a non-cohabiting partnership out of necessity, as the share of housing in affordable rental sector is very limited.*
- *Since younger respondents realise their intentions more successfully than older ones, policies that support the realisation of earlier intended births (but not 'too early' births, particularly not teenage births) potentially have a broad relevance.*

6.4 Changes in fertility intentions across the life course

(Based on WP4 work by Maria Iacovou and Lara Patrício Tavares 2011)[22]

The WP4 research by Iacovou and Tavares analysed the determinants of revisions to fertility plans. They employed the British Household Panel Survey (BHPS) using 17 waves of data between 1991 and 2007. Multivariate framework allowed the authors to analyse separately the determinants of upward and downward revisions in fertility intentions.

The analysis of changes in expected family size over a period of six years, conducted among the respondents below age 40, showed that

[22] Iacovou, M. and L. Tavares. 2011. "Yearning, learning and conceding: reasons men and women change their childbearing intentions." *Population and Development Review* 37(1): 89-123. See also Iacovou, M. and L. Tavares. 2010. "Yearning, learning and conceding: (Some of) the reasons people change their childbearing intentions." European Demographic Research Papers 3, Vienna Institute of Demography.

individuals who expect not to have any children are most likely (ca. 85%) to maintain that expectation. Expectations are much less stable among those expecting to have larger families. Changes in expected family size were frequent and occurred in both directions: upward revisions accounted for up to 40% of all changes (Table 4). The proportion of people changing their expectations is correspondingly larger below age 30, when fertility intentions are less stable.

Table 4 Changes in fertility expectations over a six-year period by age (in %)

	Age	Revise down	Stay the same	Revise up	Revise down by 2 or more	Revise up by 2 or more
Men	18-24	33.0	54.5	12.5	11.3	3.7
	25-29	25.5	55.8	18.7	7.1	4.5
	30-34	19.9	70.3	9.9	5.2	2.2
	35-39	7.8	87.9	4.4	2.4	0.7
Women	18-24	27.5	50.5	22.0	9.5	3.9
	25-29	21.6	63.4	15.0	4.9	1.8
	30-34	14.6	76.5	8.9	2.5	1.3
	35-39	4.8	92.4	2.8	1.0	0.2

Source: Iacovou, M. and Tavares, L. (2011). "Yearning, Learning and Conceding: Reasons men and women change their childbearing intentions." *Population and Development Review* 37(1): 89-123.

A detailed description of models and results is available in Iacovou and Tavares' (2010) study. Here we highlight only some key findings.

Partnership status: The presence or absence of a partner is not a very important factor, in contrast to the four-country survey by Kapitány and Spéder, summarised in Section 6.3. The most robust finding is that changing partners between the two observations is associated with increases in expected fertility. This holds for both women and men, though the coefficient is larger for men, and it is robust across all specifications. It is

also consistent with the literature on repartnering and stepfamilies (Thomson et al. 2002), where children are seen as consolidating a new union.

Women's economic position: Women who have a job show higher stability of intentions and are less likely to either increase and decrease their expectations. Women with higher earnings are more likely to decrease their expectations. These two factors partly counterbalance themselves, but at higher income above 75% of the average women with a job are more likely to revise their intentions downwards.

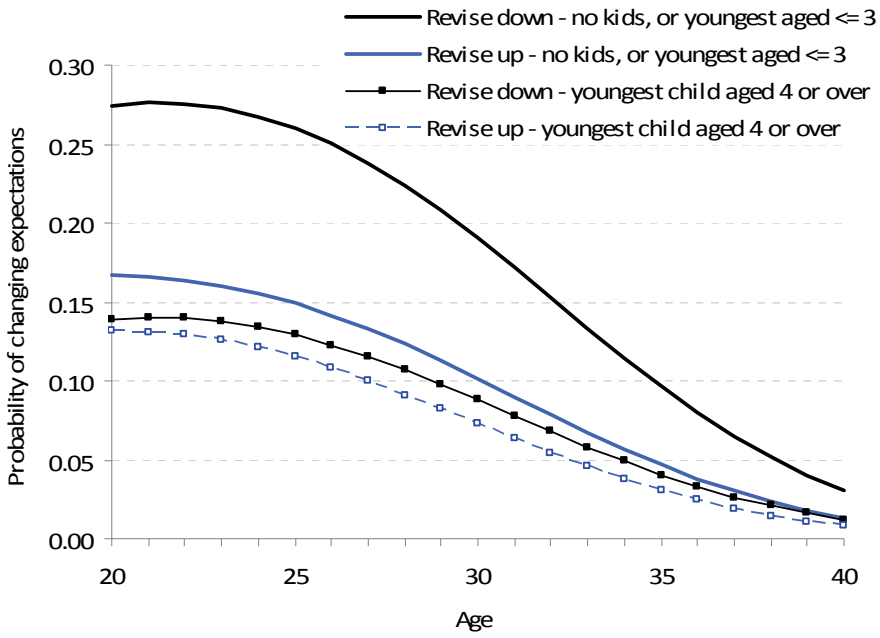
Having a child aged 4 or older is associated with a reduced likelihood of revising fertility intentions either upwards or downwards.

The combined effect of women's age and age of the child: Figure 7 assesses the relative importance of the coefficients on chronological age, parity and age of child(ren) on the likelihood of revising fertility expectations upwards and downwards for a woman who has lived with the same partner throughout, who has a job and who has average earnings. The probability that she will revise her expectations falls steeply with age, and the probability that she will revise downwards is always higher than the probability that she will revise upwards. The most noteworthy feature of this graph is the fact that the probability of revising both downwards and upwards is much lower for those whose youngest child is aged 4 or over. This effect is stronger than the effect of mother's age. Having a small child thus opens a 'window of opportunity' when a person is likely to make or revise most of the decisions relating to childbirth, and during which he or she is likely to actually have most or all of their children. This window is much narrower than the window defined by biological fecundity: once it is drawing to a close (defined here as a person's youngest child reaching the age of four) people are less likely to revise their expectations either upwards or downwards.

Partner's effect: It is clear that people take their partner's childbearing plans into account when adjusting their own plans. People whose partners expect more children than they themselves do are more likely to revise upwards; when the partner expect fewer children than oneself, one

is more likely to revise downwards. The effect appears to be stronger in the downward direction, indicating that one reason for the general downward trajectory of expectations over the reproductive life may be associated with couples' expectations tending to adjust towards the lower of the two individual expectations (Voas 2003).

Figure 7 Estimated probabilities of revising expectations by age, for women whose youngest child is aged 4 or over, and others.



Source: Iacovou, M. and Tavares, L. (2011). "Yearning, Learning and Conceding: Reasons men and women change their childbearing intentions." *Population and Development Review* 37(1): 89-123.

An asymmetric effect of the partner's income and earnings: Income and employment of women are significantly associated with revisions in expectations for their male partners in both directions. Men's income does

not affect such revisions for their female partners, and their employment affects only revisions in the downward direction.

Overall, the results confirm the findings of Udry (1983) and Monnier (1989) who suggest that childbearing decisions are made sequentially and revised on the arrival of a new child. The process of becoming a parent itself influences onre's future childbearing plans. Upward and downward changes in intentions are not equal and opposite; many factors (age, childbirth and the age of the youngest child) affect both upward and downward revisions *in the same direction*;

The study found evidence of conforming to the social norm of two children, with people who started out expecting smaller numbers of children more likely to revise upwards, while people who started out expecting larger numbers revising downwards.

Policy implications

The gap between intended and realised fertility is often conceptualised as representing an unmet need for children. It is clear that many individuals do fail to have some, or all, of the children they would have liked, due to obstacles which may include social, economic or biological constraints. However, it would be wrong to represent the entire gap between expected and achieved fertility as arising from an unmet need for children. People do change their expectations, and constraints do matter; but other things matter too. Some people decide to have fewer children than they originally wanted and some decide to have more; some find new partners and some negotiate with existing partners; some learn on the job about children and parenthood. In other words, while some people clearly experience constraints to achieving their planned fertility, Iacovou and Tavares have shown that many people simply change their minds and the difference between expressed intentions at one stage in life, and their realisation, may not reflect a generalised unmet need for children.

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6.5 Realisation of fertility intentions in Hungary and Bulgaria

(Based on WP4 work coordinated by Zsolt Spéder 2009)[23]

Previous research has primarily focused on factors which are influential for fertility decisions and behaviour of women. A comparative study on the realisation of fertility intentions in Bulgaria and Hungary, coordinated by Zsolt Spéder (2009) analysed gender-specific determinants of realising short-term reproductive plans (within two years) in a period of three years, falling within two waves of longitudinal surveys in these two countries (identical datasets were used in WP4 work coordinated by Spéder and Kapitány; see Section 6.1 above).

This study also looked at unintended births in Hungary, which constituted a sizeable share of births observed in the survey period between 2001-2 and 2005. The proportion of children whose birth was initially planned for a later point in time ('advanced childbirths', 26%) exceeded the share of children who were born to parents who did not intend to have any (12%). The chance of having an unintended birth increases with the duration of the partnership.

With regard to the realisation of 'positive' fertility intentions, some comparative results stemming from the analysis of both countries can be highlighted. Besides the usual demographic factors (age, partnership status, duration since first birth), labour market status and maternity/parental leave as well as child care provisions play an important role in the realisation of short-term fertility intentions.

Age has a significant and similar effect in both countries, characterised by a higher rate of failure at older ages (see also other WP4 contributions). *Partnership status* is also of key importance in both countries. Although it also plays a role in the formulation of childbearing intentions (Philipov et al. 2006)—people living alone plan to have children

[23] Spéder, Z. (ed.) "A comparative analysis of fertility behaviour: Bulgaria and Hungary." REPRO-Deliverable, with the contribution of Z. Blaskó, B. Kapitány, Á. Tárkányi, A. Atanasov, Z. Toneva, D. Philipov, and M. R. Testa. <http://www.oeaw.ac.at/vid/repro/bulgariaandhungary.html>.

in the short run (within 2-3 years) less frequently—its effect is significant also for their realisation in the two countries analysed. Partnership can be regarded as one of the preconditions for realising childbearing intentions. However, the role of partnership type differs between Bulgaria and Hungary: while there is no difference between married and cohabiting couples in Bulgaria, married people, especially men, have a higher chance of fulfilling their fertility intentions in Hungary. It can be assumed that different partnership forms signify different levels of partnership commitment in Hungary.

Similarly to WP4 results by Iacovou and Tavares (Section 6.4), the *time elapsed since the entry into parenthood* diminishes the chance of giving birth to the (intended) second child. Therefore, factors that prolong the period between the births of two children contribute to the diminishing success of realising intentions.

Being a *student* is incompatible with realising one's fertility intention in both countries. In Bulgaria, women *employed in the public sector* and in state companies have a higher chance to realise their fertility intentions than women who work in the private sector, suggesting that more secure job position is important to them. However, in Hungary childbearing intentions are least likely to be realised by women who occupy a *middle position* on the labour market.

Among *women on maternity leave* in Hungary, a positive relationship was found between their educational level and the chance of realising fertility intentions. This contrasts with the finding that among the economically active women, low-wage earners could more easily realise their fertility intention. Among *men*, the *income effect* could be detected only in Hungary, where higher-earning men also have a higher chance to fulfil their intentions.

In Bulgaria, *exchange of help* has had a significant effect only for childless women intending to have their first child and for men planning the birth of a second child. *Subjective variables* of attitudes and psychological wellbeing had significant effect only in Bulgaria. People with more

traditional gender role attitudes have higher chances of realising their intentions. In addition, better psychological wellbeing facilitated the fulfilment of fertility intentions.

Policy implications

- *The dual-earner family model is inevitable for securing a reasonable living standard in both Hungary and Bulgaria today. However, since the availability as well as the use of part-time work is minimal in these countries, this means full-time employment for both partners.*
- *Childrearing entails the suspension of gainful employment for one half of the couple, at least for a transitory period. Hungarian family policy encourages this withdrawal for a relatively long period of two years. The current set of policies and economic conditions does not support other options, in particular an early return to work for mothers. There is a lack of public crèches, and wages are too low to make paid full-time baby-sitters an affordable option for most couples. Higher realisation rates of birth intentions may be encouraged by expanded options of labour market reintegration, improving crèche provision and expanding part-time employment. And if reconciliation of work and family becomes easier, not only would women's employment levels increase, but probably also the chances of realising their own and their partners' fertility intentions.*

6.6 Economic uncertainty and fertility intentions, timing and level

(Based on WP4 study by Ariane Pailhé and Anne Solaz 2011)[24]

Economic uncertainty has been identified as one of the main explanations for delayed childbearing in Europe (Blossfeld et al. 2005). Ariane Pailhé and Anne Solaz (2011) examined in WP4 the impact of work uncertainty on fertility in France, using a variety of fertility indicators. France has a peculiar position in Europe, having one of the highest fertility levels, combined with generous and diversified system of family policies on one hand and high levels of employment uncertainty on the other hand. Relatively high labour protection for most employees and rather high flexibility in work-family arrangements is combined with high unemployment rate and high frequency of non-standard labour contracts, especially among younger people.

Fertility intentions are affected by uncertainty especially among men, for whim being unemployed decreases their fertility plans. Women's fertility intentions are reduced when they have an insecure job. These results suggest that for men it is important to get a job, whatever its quality or stability, before becoming fathers.

After controlling for cohort, achieved education, religiosity, age at union formation and the number of siblings, there was no effect of unemployment at the beginning of partnership on the timing of first birth. A spell of unemployment or an insecure job during partnership reduces first birth intensity among men, whereas for women unemployment does not have any significant effect. However, insecure jobs also reduce their first birth propensity. The accumulation of unemployment spells and non-permanent jobs reduces their likelihood of entering parenthood; for women, only the

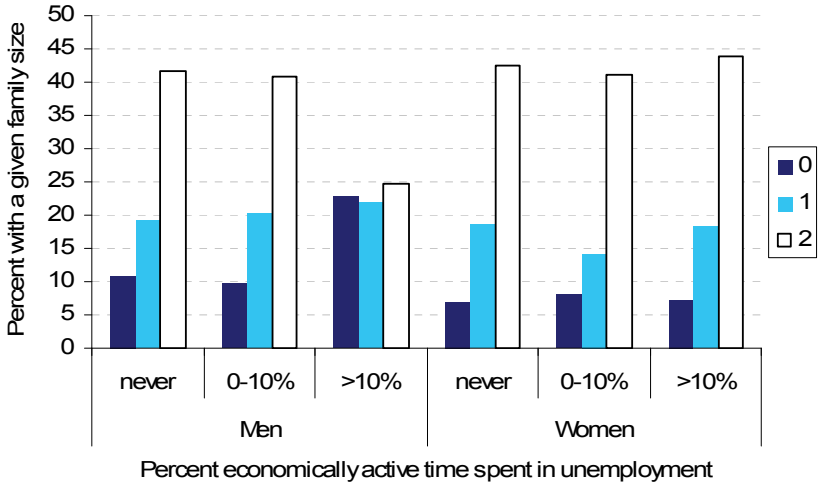
[24] Pailhé, A. and A. Solaz "Does job insecurity cause missing births in a high fertility European country? Evidence for France." *Document de travail* INED n°169 (under revision in *Demographic Research)*. An earlier version available as a REPRO deliverable: Pailhé, A. and A. Solaz. 2010. "Does economic uncertainty affect plans, timing or level of fertility? Evidence from France." In: Z Spéder, (ed.). *A summary of all findings in WP4*. REPRO-Deliverable 4.12, pp. 97-129.

accumulation of non-permanent jobs has a negative effect. However, the pattern is different for the birth of the second child: having an insecure employment path before first birth tends to accelerate the arrival of the second one. Women discouraged by the job market may decide to concentrate on the family life instead, especially once they have their first child.

To find out whether labour market uncertainty has a permanent effect on fertility, Pailhé and Solaz conducted additional analysis of completed fertility (measured at age 40). Both descriptive analysis and multivariate model show that past unemployment history neither prevents women from having children nor encourages them to have more. For men, on the other hand, the number of children is closely linked to their unemployment history. Men who have experienced several unemployment spells and have spent more than one year out of ten in unemployment since completing their education are more likely to remain childless and less likely to have two children (Figure 8). However, short-term unemployment and time spent in insecure job position (relative to the time since completing education) does not affect their completed fertility.

These results illustrate how the social roles of men and women continue to differ in France, with men still predominantly being main breadwinners. As in other European countries, a gap between fertility aspirations and behaviour persists. It results partly from unexpected shocks, such as death or disease of the partner and couple dissolution, but also from the changes in one's labour market status. The unfavourable situation on the French labour market, reflected by high unemployment, is an additional reason for postponing the first childbearing. However, the overall impact of unemployment on fertility intentions and behaviour is lower than in other countries, probably because France has rather generous family and employment policies.

Figure 8 Percentage of men and women childless and with one or two children by the time spent in unemployment in France



Source: Based on Pailhé and Solaz 2010.

Policy implications

- *Rather generous and extensive family and employment policies may reduce the negative impact of unemployment and other sources of economic uncertainty on fertility.*
- *Achieving a stable job situation is paramount for fertility decisions among men. Policies should aim to stimulate labour market functioning and job creation, especially for young adults who have excessively high unemployment rates n most parts of Europe.*

7 FERTILITY CULTURES IN EUROPE

(Work package 5, coordinated by Laura Bernardi)[25]

Work Package 5, coordinated by Laura Bernardi, was devoted to understanding reproductive decision-making through qualitative interpretative data analyses. It advanced the scientific knowledge on the different 'fertility cultures' coexisting in Europe and the way these cultural contexts influence individual and couples' fertility decision-making. The WP5 research has resulted in nine studies. Here we follow the WP5 summary report drafted by Clémentine Rossier (2010) and two other WP5 reports by Laura Bernardi, Monika Mynarska and Laura Cavalli, and discuss major results of these studies, structured along the topics of the following five subsections:

7.1 The emergence of a culture of childlessness;

7.2 Changing gender roles and fertility decisions;

7.3 When values do not fit practices: the uneven advance of social change:

7.4 A typology of declared fertility intentions;

7.5 Changing intentions and behavioural outcome over time.

The qualitative data used in WP5 were mostly collected prior to the start of the REPRO project. A series of comparable in-depth interviews was conducted with mostly middle class respondents in their late 20s and early 30s living in cities in seven European countries: Hungary, Bulgaria, Poland, Germany, Switzerland, France and Italy. With the exception of France these countries share below-replacement fertility, but the nature of the constraints

[25] Bernardi, L. and M. Mynarska. 2010. "Surely yes, surely not, as soon as, maybe, at times, surely one day: understanding declared fertility intentions." REPRO-Deliverable 5.13; Bernardi, L., M. Mynarska, and L. Cavalli. 2010. "Longitudinal analyses of intentions change over time and their relationship with behavioural outcomes." REPRO-Deliverable 5.14; Rossier, C. 2010. "Scientific report: Variation in social norms and practices of social influences in different family and fertility cultures and specific political economies." REPRO-Deliverable 5.15.

to childbearing and to the realisation of childbearing intentions varies between them.

Qualitative data are still rather rare in mainstream demographic research and their analysis is time-consuming. To make this comparative study feasible, WP5 work focused on middle class individuals around the average age of family formation. This reduced the number of interviews necessary to reach 'saturation' in each country and to perform cross-country comparisons while still dealing with reasonable sample sizes. The WP5 research team followed the principles of 'grounded theory', grouping individuals with similar practices or representations and comparing these categories. Comparative qualitative analysis allowed researchers to grasp factors of behaviours acting at the individual level (what distinguish one individual from another individual), as well as factors acting at the aggregate level (what distinguishes the individuals in one context from the individuals from another context).

7.1 The emergence of a culture of childlessness

(Based on WP5 summary report by Clémentine Rossier (2010))[26]

It can be argued that a culture of voluntary childlessness can emerge in countries that have adopted a 'post-modern vision' of the benefits of childbearing. Such a vision disregards the norms promoting parenthood in 'modern' societies and brings forward children (or childlessness) as a voluntary lifestyle choice, motivated by the quest for personal fulfilment

[26] Rossier, C. 2010. "Scientific report: Variation in social norms and practices of social influences in different family and fertility cultures and specific political economies." REPRO-Deliverable 5.15; see also Rossier, C., S. Brachet, and A. Salles. 2010. "National norms about gender roles and individual fertility intentions in France and Germany." Submitted to *Vienna Yearbook of Population Research*; Salles A., C. Rossier and S. Brachet. 2010. "Understanding the long term effects of family policies on fertility: the diffusion of different family models in France and Germany." *Demographic Research* 22(34): 1057-1096; Mynarska, M. 2009. "Values of children and the lowest-low fertility: the Polish case". Paper presented at the IUSSP Population Conference, Marrakesh 27 September - 2 October 2009.

(Van de Kaa 1996: 425). The countries analysed in WP 5 varied widely in their attitude to childlessness. Despite some data limitations, especially a low number of voluntarily childless couples in the interviews, as well as the fact that the interviews were not primarily focused on the topic of voluntary childlessness, valid inferences and conclusions can be made.

The 'culture of childlessness' is most advanced in Germany. West German female respondents, analysed by Salles et al. (2010) and Rossier et al. (2011) show how individuals end up thinking that not having a child is acceptable and even the best solution for them.

They do value children and think that children deserve the best. However, partly due to rather limited formal child care options until recently, mothers had to sacrifice their personal and professional life for their children. There is a widespread notion that one has to choose between two incompatible alternatives: either a career or family life. As one respondent put it: "*if somebody decides to have children, for me it's either children or a career. Both together, that doesn't fit.*" Also commonly expressed is a wish to stay childless because respondents think the sacrifices of motherhood would be too demanding for them. In part, these expectations are linked to traditional expectations about women's complete responsibility for early child care for at least the first three years of its life (see also WP6 work reported in Section 8.1))

In Italy, where the 'familistic culture' still remains quite strong and family networks are more important, the wish to remain childless is not as frequent as in Germany. However, Italian female respondents who do not want to have children exhibit reasoning similar to that observed among their German counterparts. Women also feel that having children may put their place in social life at stake. Employment and independence (if not power) are part of their identity and it is hard to sacrifice them in the name of children.

Preliminary results indicate that while many men wish to remain childless in West Germany, this is not the case in Italy. One possibility to explain this outcome may be a higher rate of divorce in Germany and

gender-biased regulations of parental custody. Men may not want to risk to have children they will end up seeing once in a while and for which they will pay at a distance.

In contrast in Poland, voluntary childlessness remains rare, as should be expected from the fact that the shift to the 'reflexive' values, characterised by the second demographic transition, is very little advanced there (Sobotka 2008). All the respondents think children are very important and they all want to have children some day. Mynarska's (2009) analysis of the value of children in Poland depicts a strong social pressure against childlessness in her sample. A high regard for 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 childlessness, even unintended, that can be as severe as being left by a partner. Mynarska shows that many of the mentioned benefits of children are characteristic of a 'modern' vision of childbearing, as opposed to a 'post-modern' vision of childbearing as a personal fulfilment. Respondents often referred to the advantages of adopting a 'normal', socially sanctioned life course, where having children gives one a status of an adult, entails establishing a 'real' family, binds a couple relationship and also provides a pathway to pass over one's material possessions and emotional heritage. In addition, Polish respondents also emphasised the importance of care, support and company in old age as one of the main benefits of childbearing.

Policy implications

- *Improving the work-life balance is of paramount importance in countries like Germany or Italy, where many women feel they have to choose between motherhood or career and other interests. More women could opt for having children if they had a wider set of options available for combining childrearing with other interests.*
- *Attitudes to family life, child care arrangements, or women's roles change more slowly than many other aspects related to*

childbearing. Policy-makers should not expect immediate results from new child care policies as measures targeted at changing childbearing and childrearing practices need to be durable as the adoption of new practices will often be gradual only.

7.2 Changing gender roles and fertility decisions

(Based on WP5 summary report by Clémentine Rossier (2010))[27]

All WP5 researchers paid ample attention to the link between changing gender roles and fertility decisions (Bernardi et al. 2008; Matysiak and Mynarska 2010; Rossier et al. 2011; Salles et al. 2010). They highlighted the following three interrelated dimensions—in terms of their representations as well as practices—as the key factors explaining individual fertility decision-making in contemporary Europe:

a) Women's participation in the labour market;

b) Men's involvement in unpaid family work;

c) Use of non maternal child care options.

These three dimensions represent different aspects of gender roles and relate to the following questions: Is it women's role to engage in paid employment? Is it men's role to care for children and perform household chores? Is it women's role to take care of their children when they are small,

[27] Rossier, C. 2010. "Scientific report: Variation in social norms and practices of social influences in different family and fertility cultures and specific political economies." REPRO-Deliverable 5.15; see also Matysiak, A. and M. Mynarska. 2010. "Women's determination to combine childbearing and paid employment: How can a qualitative approach help us understand quantitative evidence?" Working Paper no. 7/2010, Institute of Statistics and Demography, Warsaw School of Economics.; Rossier, C., S. Brachet, and A. Salles. 2010. "National norms about gender roles and individual fertility intentions in France and Germany." Submitted to *Vienna Yearbook of Population Research*; Salles A., C. Rossier and S. Brachet. 2010. "Understanding the long term effects of family policies on fertility: the diffusion of different family models in France and Germany." *Demographic Research* 22(34): 1057-1096; Bernardi, L., J. Klobas, A. C. Liefbroer, D. Philipov, and O. Thévenon. 2008. "Reproductive decision-making in a macro-micro perspective: State of the art review." *REPRO-Deliverable 7.19.*

or is it acceptable or even desirable that other adults (their fathers, other family members, or paid employees) take on that role?

WP5 analyses show that the decision to have a child closely relates to each couple's answer to these questions, as well as on their actual practices with regard to women and men's participation on the labour market and in family work and their plans to use non-maternal child care. These considerations jointly form the basis for couples' calculations of the benefits and drawbacks of having a child at a given point in time.

Policy context and gender roles

Studies undertaken in WP5 show that labour market options for men and women, as well as child care options in different countries are of paramount importance for understanding the way respondents envision and practice gender roles. France is the only country analysed in the frame of WP5, alongside eastern Germany, which provides affordable and abundant public or private child care options for children under the age of three. French respondents approve of these options and make a good use of them. They believe in the combination of work and family: to them, it is possible and even preferable for mothers with young children to remain at work (Salles et al. 2010). Also in eastern Germany crèches are widely accepted. One interviewed woman even stated that going to crèche very early is good for the 'social development' of the child (Mynarska et al. 2009).

In the case of West Germany and Italy, the lack of affordable child care options and negative attitudes towards child care means that most women have to stop working after childbirth until the time their child goes to kindergarten and then work part-time when their children attend primary school. In eastern European post-socialist countries studied in WP5 (Bulgaria, Hungary, Poland) women are also expected to stay at home when they have small children, and child care options below age 3 are limited and negatively perceived. In these countries as well as in eastern Germany a peculiar attitude to women's work crystallises from many interviews with women: they think that having a job is normal for a woman, but that having

a carrier is incompatible with childrearing. And their preference is clear: they all choose to have a family.

Strong norms about mother's care at an early age are aptly depicted by a Hungarian respondent, 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: 15). Grandmothers are an important source of help. In Poland grandparents are often expected to help with child care from the very early stage (Mynarska et al. 2009). In Bulgaria, grandparent's care is also facilitated by frequent co-residence of the young couple with the parents of one of the partners, especially prevalent in small towns and villages. Such living arrangements also suggest that the older parents take care of their grandchildren and do most of the housework, while the young partners are at work (Bernardi et al. 2008).

Men's involvement in child care and household work

In most contexts analysed in WP5 gender roles are still predominantly traditional, characterised by a low degree of men's involvement with childrearing and most other regular household tasks. This may explain why in the interviews collected in Bulgaria, Hungary, Poland and Italy, men's involvement in family care does not appear to be important in couples' fertility decision-making (Bernardi et al. 2008, Matysiak and Mynarska 2010). In contrast, men in France and Germany often contribute to family work (Rossier et al. 2011). The relationship between men's involvement in family work and fertility decisions depends at least partly on the 'national model' of gender roles in each country—promoting the male breadwinner model in Germany and the dual earner couple in France. In these two countries Rossier et al. (2011) found that individuals who are unable to conform to the 'national model' of gender roles tend to have negative fertility intentions. This discrepancy may be linked to a lack of

men's—but also of women's—involvement in family work, or to a lack of men's involvement in the economic sphere.

Policy implications

Schemes which support men's involvement in family work and child care—nested within more general family policies (such as the incentive to take part of the parental leave for fathers)—were successful in northern European countries. However, given that in many countries with low support to working mothers rather traditional norms about gender roles prevail, policies targeted at promoting early child care and men's involvement in family work may initially have a limited impact. Therefore they need to be durable and will only be effective over a longer time.

7.3 When values do not fit practices: the uneven advance of social change

(Based on WP5 summary report by Clémentine Rossier (2010))[28]

Individual's values and behaviours are usually in agreement, conforming to a psychological need to have a coherent approach to life. People's visions of women's paid work usually match 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, and the same can be said of institutional child care. This pattern is clear, for example, in the case of women's attitudes towards work in eastern European countries. A majority of women have worked in the labour market there since decades, but usually in low-paying and low-level positions, and they also kept

[28] Rossier, C. 2010. "Scientific report: Variation in social norms and practices of social influences in different family and fertility cultures and specific political economies." REPRO-Deliverable 5.15; see also Mynarska, M. 2010. "Deadline for parenthood: fertility postponement and age norms in Poland." *European Journal of Population* 26 (3): 351-373; Rossier, C., S. Brachet, and A. Salles. 2010. "National norms about gender roles and individual fertility intentions in France and Germany." Submitted to *Vienna Yearbook of Population Research*.

responsibility for most of the domestic work. Accordingly, paid work there is seen as a normal and desirable part of life for women, although a work career is seen as detrimental to a woman's family (see also Section 7.2).

However, a mismatch between the stated ideals and actual practices may arise. In WP5 studies, the link between negative fertility intentions on one side and a mismatch with regard to gender roles ideals and practices on the other side was noted (see Section 7.2). Another discrepancy repeatedly identified by WP5 researchers is the contrast between prevailing social norms and structural conditions in times of social change. When structural conditions change, individuals could be expected to adjust their behaviours rapidly. However, social scientists repeatedly observed that individuals do not adapt fast, because they follow social logic: norms often change more slowly than structural conditions, and 'obsolete' values then hinder individuals in the adoption of the new behaviours, until the values change and 'catch up' with social, economic or technological change (Rossier and Bernardi 2009). This finding is also closely linked to the argument pursued by Spéder in WP 4 that people are less able to realise their childbearing intentions in times of rapid social changes after the political regime change in Bulgaria and Hungary around 1990 (Section 6.2). In WP5, Salles et al. (2010) highlighted the remarkable stability of attitudes towards child care and working mothers within each country studied: in France "even couples with stay-at-home mothers believe in the benefits of organised day care", whereas in Germany "even dual earner couples with children believe in the benefits of exclusively maternal care". Obviously, strong social influence mechanisms combined with the historical legacy of prevailing family policies in the past are at work in sustaining country-specific attitudes towards child care and the role of mothers. Given the large inertia in child care-related attitudes, new policies may be slow in affecting fertility behaviour. In Poland, Mynarska (2010) stressed the persistence of negative views on later timing of childbearing despite economic and institutional factors favouring a rapid shift to a late-fertility regime. Mynarska suggests that the main reason lies with 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: 357).

The argument that value changes may frequently lag behind structural changes in society has been repeatedly made in the social science and demographic literature. However, the persistent mismatch between structural conditions, norms and values, as identified in a number of instances by WP5 studies, suggests that individuals often act more according to their socially-inspired visions of what is right than according to the rational cost-benefit calculation.

Policy implications

- *The lack of fathers' involvement in domestic work is often seen as one of the reasons for low fertility. However, it is typically invisible in countries where women have to stop working at the birth of a child, because individuals there have strong beliefs about the gendered nature of domestic and parental work: fathers' lack of involvement is perceived as 'natural' and normal. However, in countries supporting the work–family life combination, this obstacle—creating the double burden' for women who are employed and perform almost all the family work—becomes visible. Policies promoting the work-family balance should therefore be designed to promote the involvement of fathers in domestic work and gender equality within dual-earner families.*
- *WP5 analyses show frequent 'delays' between structural changes in the society and the adoption of the corresponding new norms in the realm of childbearing. Policy makers should expect a time lag between the introduction of new policies and their initial impact due to 'normative resistance'.*
- *However, in the long run, policies often have larger effects than expected when they induce normative changes. Eventually, the*

desired practices may also be adopted by individuals who do not benefit directly from policies.

7.4 A typology of declared fertility intentions

(Based on WP5 report by Laura Bernardi and Monika Mynarska (2010))[29]

Laura Bernardi and Monika Mynarska (2010) focused on the subjective expression of the intention to have a child. They employed bottom up approach to classify fertility intentions, starting from subjective reports of fertility goals and related intentions. Their study explored fertility goals, the relation between fertility goals and fertility intentions and the way in which specific intentions are motivated, argued for and interpreted by the respondents. Semistructured data were based on 261 interviews (of which 179 women) conducted in Italy, France, Germany and Poland between 2004 and 2007 with both childless individuals (147) and those in the early stage of family formation (114 parents, vast majority with one child). The interviews were classified according to the clarity of childbearing goal, the strength with which it is expressed, and the time horizon for its realisation. Bernardi and Mynarska developed six categories of fertility intentions, which cover all the cases encountered in the interviews. These six categories are distinguished according to the presence of a clearly expressed desire to have a child and a clear time frame for it. For each category, main arguments, given by the respondents to justify their childbearing plans were analyzed to understand factors that shape negative, positive or uncertain fertility intentions.

Category 1: "Surely yes" (29 childless, 32 parents)

The respondents in this category want a child mainly because of its emotional advantage (joy and happiness). They feel they are ready to have a

[29] Bernardi, L. and M. Mynarska. 2010. "Surely yes, surely not, as soon as, maybe, at times, surely one day: understanding declared fertility intentions." REPRO-Deliverable 5.13.
<http://www.oeaw.ac.at/vid/repro/assets/docs/Classification-fertility-intentions.pdf>

child for the following reasons: (1) being mature and responsible enough to become parents; (2) being in a relationship that is stable; (3) being able to provide for the future offspring; (4) wishing to become parent before one is too old, in order to facilitate conception and child-rearing. Respondents in this category are inclined towards rather young parenthood, as it makes childrearing burdens lighter and communication with a child easier.

Category 2: "Surely Not" (10 childless, 30 parents)

These respondents represent the opposite end of the fertility intentions continuum. They are firmly decided not to have a(nother) child. For the childless respondents in this category, their position is generally related to two aspects: they either completely miss the desire to have a child or they have highly valued life priorities perceived as competing and incompatible with having children (self fulfilment at work, personal development, artistic expression, high standards of living, personal freedom, travelling, hobbies and so forth.) For parents in this category, they have managed to reconcile their family life and other life spheres and another child would destroy this equilibrium in the respondents' opinion. Alternatively, they feel they are too old to have another child. The most distinctive feature of all respondents belonging to this category is their satisfaction with the lifestyle they have at the moment and their conviction that having a child or another child would damage it.

Category 3: "As soon as"(contingent intentions; 36 childless, 20 parents)

These individuals mention a variety of reasons which interfere with their intention to have an otherwise desired child. These reasons are mostly perceived as external factors, often outside of the control of the respondent. Four external obstacles to childbearing have been identified. First, there are relational issues, most typically an absence of a suitable partner or the lacking readiness of the partner to have a(nother) child. Second, being enrolled in education also means postponing childbearing. Third, there are issues related to employment (stable job or seniority to be attained). The

fourth aspect relates to housing. Several aspects are frequently brought up by the respondents with uncertain intentions. Relationship problems and general doubts on whether the current partner is the 'right' one occur frequently. In addition, even a strong desire for children, may not lead to clear intentions when other goals (mainly educational and professional development) have a priority over parenthood. Many respondents in this category also express various fears related to parenthood: losing personal freedom, reducing the standard of living, not being able to balance family and childbearing, or being a bad parent.

Category 4: "Surely one day" (45 childless, 8 parents)

This category is mostly made up by the childless respondents. What links these men and women is their feeling that they have not reached the stage in their lives when they can even consider childbearing. Eventually, they desire to have a child, but typically in a far-off future. Their reasoning is less centred on external obstacles and conditions and more on the perceived distance from the issue. The distance is related to a young age, a lack of economic independence or a lack of a partner, but it is also normatively defined by the established sequencing of life course transitions. Individuals still enrolled education want to complete it, find a job, leave parental home, enter a stable union and, finally, plan childbearing.

Category 5: "Maybe" (*uncertain intention; 19 childless, 21 parents*)

These respondents do not express a strong desire for a(nother) child. Their intentions are uncertain and ambiguous. They usually give one of the following reasons: 1) problems with the current relationship; 2) competing intentions between parenthood and other highly valued life-priorities (these conflicting values are often expressed in fears related to parenthood: losing personal freedom, reducing the standard of living, not being able to balance family and childbearing); 3) fears to become bad parents (often linked to their negative childhood experience). These reasons are often similar to the reasons given by the "certainly not" category. What is remarkable is the

small space that financial matters occupy in these interviews. Even if they appear, they are not the main arguments for respondent's uncertainty.

Category 6: "At times" (*ambivalent intentions, 8 childless women and 3 mothers*)

This category comprises only women. They have a strong perceived incompatibility of a possible desired parenthood with other life course spheres, similar to the one described by the respondents in "surely no" category. However, for these respondents in the 'ambivalent' category, living a childless life is not an easy alternative. Childless respondents in this group held behavioural beliefs, which contrast positive aspects of childlessness with the disadvantages of parenthood. However, fears of loneliness and the emotional and practical consequences of childlessness are frequent, alongside with concerns about care and wellbeing in old age and the fact that children bring joy and happiness and are a 'necessary part of a family'. These beliefs provide enough reasons not to take a final decision against parenthood.

Policy implications:

- *Given the importance of job stability as a condition to family formation, governments should improve young people' integration in the labour market with a set of measures which reduce uncertainty concerning the employment duration and its level of remuneration (Categories 1, 3 and 4)*
- *Improve the work-life balance by providing incentives which make parenthood more attractive (Categories 2-6)*
- *Improve young people's access to affordable and independent accommodation (Categories 3 and 4)*

7.5 Changing intentions and behavioural outcome over time

*(Based on WP5 repor*t by Laura Bernardi, Monika Mynarska and Laura Cavalli (2010))[30]

This study complements the previous WP5 findings, summarised in sections 7.1-7.4, with the research on the stability and realisation of childbearing intentions. Laura Bernardi, Monika Mynarska and Laura Cavalli posed the following questions:

- What happens to (un)certainty in intentions as time passes by?
- Do intentions change?
- Are they getting realised?
- What are the reasons and processes behind various shifts and changes?

This work thus constitutes a qualitative counterpart to the work on intentions realisation and its determinants, reported in WP4. Two studies are reported here:

1. Couples' reproductive decision-making and changing intentions over time (based on the Swiss data);
2. Fertility intentions and subsequent behaviour (based on Italian data)

Both studies used the categorisation of intentions developed by Bernardi and Mynarska (2010) and described in Section 7.4 above.

The Swiss study: Couples changing intentions over time

Three waves of couple interviews were realised between December 2005 and March 2009 in the French-speaking part of Switzerland. Of the original 31 couples, 20 were reached for the second interview after their child was born and the mother was still in maternity leave (within 4 months after the birth). The third wave took place when the child was aged 12 months or more and 20 couples were reached (not always the same couples

[30] Bernardi, L., M. Mynarska, and L. Cavalli. 2010. "Longitudinal analyses of intentions change over time and their relationship with behavioural outcomes." REPRO-Deliverable 5.14.
<http://www.oeaw.ac.at/vid/repro/assets/docs/Changing-intentions.pdf>.

as those included in wave 2). In total, 142 interviews were conducted. Bernardi, Mynarska and Cavalli have focused on the evolution of the intention to have a second child, which has been discussed by 15 out of the initial 32 couples. Their work focuses on the couples who have changed their intention between interview waves.

Three couples shifted from a conditional to a certain intention (from *Surely one day* to *Surely yes*), while another three couples shifted from an uncertain to a certain intention (from *Maybe* to *Surely yes* or *Surely no*). Finally, one couple changed from a certain to a conditional intention (*Surely yes* to *As soon as*). These cases allowed identifying different types of dynamics of intention revisions. First, when the desire for children is strong, 'conditional intention' may become certain, even when there was no change in the actual situation of the couple. Conditioning factors or doubts simply lose salience and individuals re-order their priorities. Second, among younger couples the step from certain intentions to conditional intentions depends on a progressively developing conscience about their actual material conditions and life course aspirations other than family enlargement. The birth of the first child functions as a turning point, which may delay the arrival of the previously surely intended second child. Similarly, the recognition of material difficulties after the first birth may explain the transition from an uncertain intention to a certain negative one.

Italian study: Fertility intentions and subsequent behaviour

The Italian data were collected in 2004-2005 and in 2009. The initial sample of respondents in 2004-2005 included 74 women aged 23 to 45, with different partnership status and educational levels, who ranged from childless women to mothers of five children, as well as 21 men. All the semi-structured interviews touched on union and fertility histories, the upbringing in the family of origin, the current relations with relatives and partner and practices, intentions and expectations related to parenthood. A sample of 15 individuals living in Cagliari (Sardinia)—13 women and 2 men—were interviewed again in 2009. WP5 work focused on fertility

intentions and subsequent behaviour of these respondents. Ten respondents in the sample had a(nother) child between the first and the second wave. For three respondents, this was not in line with their intention in 2004-2005. In addition, two respondents did not have a child between wave 1 and 2, but their fertility intentions have changed (from *As soon as* to *Excluded* in the first case and conversely in the second one).

There was a straightforward link between 'certain' positive fertility intentions and subsequent childbearing: respondents, who belonged to *Surely yes* category at wave 1 increased their parity in the following four years. There was no case in which certain fertility intentions (*Surely yes* or *Surely not*) would lead to inconsistent behaviour (i.e. a childbirth) four years later. Discrepancies between intentions reported at wave 1 and behavioural outcomes reported at wave 2 were associated with a shift in intentions in almost all cases.

Two important sets of factors influencing both fertility intentions and their realisation were identified: factors related to employment and those pertaining to partnership dynamics. Most of the changes of intentions over time could have been attributed to one of the components of the *theory of planned behaviour* (TPB): attitudes, norms, or aspects of perceived behavioural control. Intention *As soon as* turned into *Surely no* when sufficient behavioural control could not have been achieved. *Surely one day* intention transformed into *Surely yes* with an improvement of economic situation (behavioural control) or with development of more positive attitudes towards childbearing. A shift from *Surely no* to *As soon as* category was driven by perceived norms, related to family model with two children. In two cases, unintended pregnancies 'escaped' the logic of the theory of planned behaviour. Rather than cognitive relationships between intentions and behaviour, emotional and affective factors seem to have been at work in these cases.

Qualitative data from the Swiss and Italian surveys show that TPB can be rather successfully used to predict reproductive behaviour. However, there remain problems with the measurement of the theory's construct,

especially in international comparative surveys (Ajzen 2002). Qualitative interviews may give important insights in this respect. Specifically, the WP5 work resulted in the following suggestions to the surveys asking about reproductive intentions

- Adding a direct follow-up question in case of answers like "probably yes, probably not," which would ask what factors this uncertainty depends on;
- Separating the measurement of fertility intentions into a two step-question: The first capturing the intended goal and the second one asking about the intended timing for the realisation of a given intention;
- Adding an indicator signalling how certain respondents are of their attitudes, subjective norms and perceived control items when measuring the TPB predictors of intentions.

Policy implications:

In many cases, fertility intentions—especially when they are contingent, uncertain, or ambivalent—are unstable and evolve over time. Policy interventions, particularly when they are stable and durable, are likely to affect this evolution.

8 THE MACRO-MICRO LINK: FERTILITY DECISIOMAKING IN CONTEXT

(Work package 6, coordinated by Aart C Liefbroer)[31]

In WP6 multi-level models were used to study the influence of economic, cultural and institutional macro-level factors on individual-level fertility attitudes and behaviour.

Attention was focused on three sets of factors, around which the next three subsections are organised:

8.1 Norms concerning fertility-related behaviour (fertility norms);

8.2 Determinants of variation in fertility intentions;

8.3 Factors influencing childlessness, completed family size and the timing of childbearing

These three broad WP6 tasks used extensive individual-level datasets that cover most European countries. Multi-level models were employed to study to what extent these norms, intentions and behaviours differ between individuals within a country and to what extent country-level differences play a role. In addition, these models were used to assess to what extent these differences can be explained by taking relevant institutional, cultural and economic factors into account. Some parts of WP6 are relatively close to the work reported in WP2 and described in sections 2-4. However, WP2 remains firmly anchored at an aggregate level, using macro-level data only, whereas WP6 uses individual-level datasets and models that connect the micro-evidence (individual level) with macro-level factors and outcomes taking into account also the intermediate level of regions within countries (Testa's study on fertility intentions, Section 8.2).

[31] Liefbroer, A. C. and E.-M. Merz. 2009. "Report on analysis of ESS data on cross-national differences in perceived norms concerning fertility-related behaviour." REPRO-Deliverable 6.16; Testa, M.R. 2010. "Child-number and child-timing intentions in a micro-macro European framework." *European Demographic Research Papers* 2010 No. 4. Vienna: Vienna Institute of Demography; Merz, E.-M. and A.C. Liefbroer. 2011. "Report on analysis of ESS data on cross-national differences in the timing and quantum of fertility." REPRO-Deliverable 6.18.

8.1 Perceived norms concerning fertility-related behaviour: Cross-national differences

(Based on WP6 report by Aart C. Liefbroer and Eva-Maria Merz (2009))[32]

Norms belong to the three cornerstones of Ajzen's (1991) theory of planned behaviour. They fulfil an important psychological function in regulating the life course (Heckhausen 1999) and are important for demographic decision-making (Liefbroer and Billari 2009). Differences in fertility patterns across countries may partly stem from the differences in prevailing norms. Other explanations suggest, however, that the importance of norms has waned during the last decades owing to increased individual autonomy and rising tolerance of non-conventional and non-traditional behaviour (van de Kaa 1987; Beck and Beck-Gernsheim 1995). Given these opposing views on the existence and importance of norms, the WP6 study by Aart C. Liefbroer and Eva-Maria Merz (2009) examined the existence, content and cross-national variation in fertility-related norms. Their report addressed the following research questions:

1. What kinds of norms exist in Europe with regard to childbearing issues?
2. How large is the variation in childbearing norms across Europe?
3. How can cross-national variation in childbearing norms be explained?

Data for 25 countries, including on average 1500 respondents aged 15 and older per country, were drawn from the 2006 wave of the European Social Survey (ESS). Questions pertaining to four fertility-related norms were analysed: 1) age when women and men are considered too young or too old for having children; 2) approval of voluntary childlessness; 3) approval of having a child in unmarried cohabitation; 4) approval of having a full-time job when the child is below age 3.

[32] Liefbroer, A. C. and E.-M. Merz. 2009. "Report on analysis of ESS data on cross-national differences in perceived norms concerning fertility-related behaviour." REPRO-Deliverable 6.16.
<http://www.oeaw.ac.at/vid/repro/assets/docs/Norms_fertility-behaviour.pdf>.

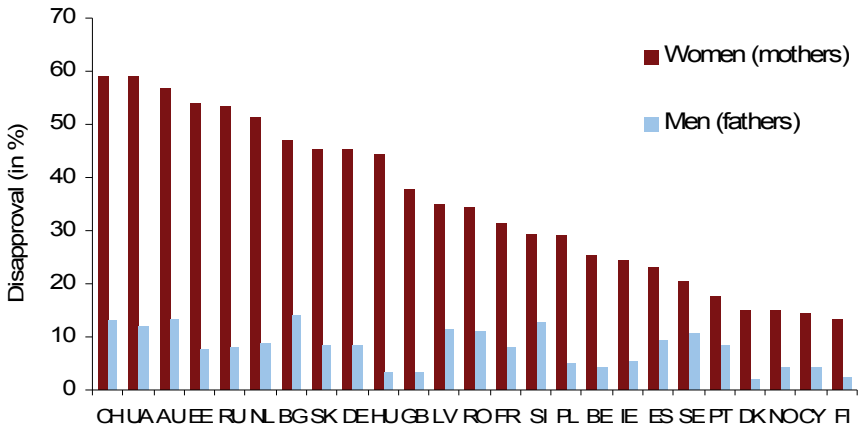
Descriptive findings: variation in childbearing norms

Relatively little variation exists across Europe in the mean lower (age 19 years for women and 20-21 for men) and upper age threshold to childbearing (in most countries 40-42 for woman, 44-46 for men). The social reproductive life span is therefore shorter than the biological reproductive life span. A large variation exists between countries in disapproval rates with respect to voluntary childlessness. Disapproval rates of female voluntary childlessness vary form 4 % in Sweden to 86 % in Ukraine. In ten European countries a majority of the population disapproves of voluntary childlessness; almost all of these countries are formerly state-socialist countries in central and eastern Europe. At the same time, another nine countries—mostly western and northern European ones—have less than 20 % of the population disapproving of voluntary childlessness of either men or women.

Especially some former state-socialist countries, such as the Ukraine, Bulgaria and Romania, highly disapproved of voluntary childlessness and unmarried parenthood. Overall, only a minority of respondents disapprove of having children while living with a partner unmarried except in the Ukraine, where over 50 % of respondents disapprove of this behaviour. In contrast, a very tiny share of respondents expresses disapproval in the Nordic countries. Considerable variation exists with regard to combining motherhood and full-time employment. However, the pattern of disapproval is quite different than for other norms. A majority of respondents in Ukraine, Estonia and Bulgaria disapprove of being full-time employed and having a child below the age of 3, but the same is also true in Switzerland, Austria and the Netherlands, countries that have much less strict norms with regard to other aspects of childbearing behaviour. In addition, disapproval of combining motherhood and a full-time job is even surprisingly high in Scandinavian countries, with between 13 and 21 per cent of respondent disapproving of this combination. Norms for men and women differ very strongly, with only a small share of respondents disapproving full-time work for fathers with young children (Figure 9). For example, in

the Netherlands more than half of the respondents disapprove of full-time female labour force participation while having little children whereas only nine per cent disapproves of males combining these two roles.

Figure 9 Disapproval of having a full-time job for fathers and mothers with children below age 3



Source: Liefbroer and Merz 2009, Figure 4.2

Note: Darker (or dark red) bars represent the percentage of respondents disapproving mother's full-time job, whereas the light grey (or light blue) bars represent the percentage disapproving father's full-time work

Variation in childbearing norms

Multilevel modelling was used to address the following two questions:

1. How much of the variation in childbearing norms in Europe is explained at the national level?
2. To what extent is cross-national variation in childbearing norms related to differential advancement of countries in terms of the Second Demographic Transition?

The latter question relates to the framework of a profound change in family-related values and behaviours, elaborated by Lesthaeghe (1995, 2010) and van de Kaa (1987, 2002).

Three important conclusions can be pointed out. First, the variation in norms that had relatively low cross-country variation in the descriptive analysis (lower and upper acceptable age for childbearing and disapproval of men combining a full-time job and having small children), is by and large accounted for by individual-level differences, with a bare 5 % of the variation attributable to the country-level differences. 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 30 % of the variation is located at the country level. Second, cross-national variation in approval of voluntary childlessness and in approval of having children in a consensual union is strongly related to how far a country is 'advanced' in the Second Demographic Transition (SDT) process. The most advanced countries have much higher approval levels of these behaviours, indicating that the changes in norms occur in tandem with the changes in values and behaviours typical of the SDT. However, other norms analysed by Liefbroer and Merz remain more or less unaffected by a country's advancement in the SDT. Third, 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 to having a child outside marriage remain prominent, even if compositional differences in these individual-level characteristics are taken into account.

Explaining cross-national variation in childlessness norms

Finally, special attention was given to the norm about voluntary childlessness, which varied strongly between countries. Two-level models were used to investigate variation in the association between individual and

cultural factors with norms on voluntary childlessness in 25 European countries. The role of individual determinants, such as age, gender and education, was analysed alongside the role of macro-level structural and cultural determinants of norms about childlessness, specifically, the availability of child care facilities, the role of religion and gender equality.

Especially cultural factors, such as individual religiousness, education and gender equality in a country were important factors associated with approval of childlessness. Interestingly, most variation in norms on childlessness was explained by country-level factors, especially gender equality. More tolerant views with respect to voluntary childlessness were found among women, singles, respondents without children, the currently employed and those satisfied with their income level compared to their counterparts: partnered, fathers, currently not employed and less satisfied with income. Consistent with earlier work, religious people were found to endorse more negative norms with respect to childlessness compared to non-believers. The gender difference does not seem surprising considering the persistence of higher opportunity costs for women of becoming a parent (cf. Liefbroer 2005). The gender main effect disappeared when adding the interaction with education, pointing to structural constraints for women to enter parenthood, especially for those who have invested in higher education and better career opportunities. Contrary to earlier research, older respondents showed stronger approval of voluntary childlessness, with a highest approval around age 45.

Most important was the explanation power of country-level predictors. Adding these macro factors, i.e. GDP, gender equality and child care availability, increased the explained variance of the model by 24 per cent. In particular, gender equality was strongly associated with norms about voluntary childlessness. In countries where the level of gender equality is high, it might be commonplace to accept that both men and women make autonomous decisions about how to structure their lives. As a result, the decision not to have children is not met with much disapproval. However, the availability of child care facilities did not associate significantly with

norms about childlessness. Among people with children, though, parents in countries where a large child care gap existed were more disapproving of voluntary childlessness than parents in countries where good parental leave and child care arrangements existed. It seems that parents who live in countries where they had to make relatively large sacrifices to care for their children are much more disapproving towards people who make the choice not to have children—and thus not to make these sacrifices themselves.

These findings show that quite strong opinions on the appropriateness of specific aspects of childbearing behaviour 'still' exist in many European societies. This widespread existence of childbearing norms is remarkable, given that theories of modernisation—such as the second demographic transition—expect an increase in the importance attached to individual autonomy and thus a weakening of normative constraints on demographic behaviour. These norms may be less binding than in the past, but still have an important orienting function. The study also conveys clear evidence that a double standard continues to exist with regard to the combination of parenting young children and full-time employment. For fathers, full-time employment is widely accepted, presumably because they are not expected to spend much time on parenting activities anyway. For mothers, strong resistance to this combination is still pervasive in many European countries. A likely reason is that parenting is still considered mainly to be the task of the mother and that the parenting role may be thought to come under pressure if much time of the mother is consumed by work-related activities.

Policy implications

- *If one accepts the assumption that the norms on childbearing-related behaviour that exist within a country have an impact on actual childbearing among the population, the most general implication is that policy makers should be aware of the strength of these norms. For instance, in countries where combining motherhood and full-time employment is strongly disapproved, policies that try to*

increase female labour force participation may not be as effective as in countries where combining motherhood and full-time employment is approved of.

- *If norms influence actual behaviour it might be useful to try to change norms that conflict with existing policy aims. Again, combining motherhood and full-time employment provides a compelling example. This double standard with regard to combining parenthood and labour force participation strongly discourages female labour force participation, motherhood, as well as the combination of both in many countries. Such a prospect is particularly alarming to many European governments trying to increase either female labour force participation, or fertility, or both. How to overcome it? Given the high level of disapproval of this behaviour, policies that allow this disapproval to diminish may be highly effective in changing behaviour. Ways of doing so could be to show that it is actually quite feasible to combine both roles, or to show that the quality of existing child care is high and that children are not in any way harmed if they spend a considerable amount of time in such child care.*
- *Another potential avenue is to take the opposite road. Rather than trying to loosen norms on motherhood and full-time employment, one could try to strengthen the negative norms on fatherhood and full-time employment. If successful, this could lead to fathers taking more responsibility for the actual parenting of their children, and this in turn could allow mothers to increase their labour force participation.*
- *The finding that disapproval of voluntary childlessness is weaker in countries where gender equality is high than in countries where gender equality is low, may have important implications. If the same relationship between gender equality and norms might also hold for other norms, this could imply that a general policy to increase the position of females in society might indirectly translate into*

increased autonomy for women to make their own decisions. This increased autonomy could make it easier for women to ignore norms that conflict with their own interests, and it might—in the long run—even lead to a weakening of norms that restrict women's decision-making autonomy in fertility-related issues.

8.2 Child-number and child-timing intentions

(Based on WP6 work by Maria Rita Testa (2010))[33]

The work developed by Maria Rita Testa in WP 6 analysed individual and contextual determinants of fertility intentions. This study attempted to shed light on the causal process underlying fertility behaviour of individuals in a social context as well as on selected aggregate-level factors influencing fertility decision-making of Europeans.

The analysis used Eurobarometer survey data collected in 2006 in the 27 EU countries as well as in Croatia and Turkey. The author restricted the analysis to women and men in the prime reproductive ages, including 5291 respondents aged 20 to 39 years.

Testa focused on two questions on fertility intentions included in the Eurobarometer survey.

- The first one refers to the intended family size: "How many children do you (still) intend to have?" Respondents were given a choice between seven answers ranging from "no children" to "six or more children".
- The second one refers to the short-term intentions within the next three years and was asked only to respondents who intended to have (at least) one additional child: "Do you intend to have a(nother) child in the next three years?" Respondents were given a choice

[33] Testa, M.R. 2010. "Child-number and child-timing intentions in a micro-macro European framework." *European Demographic Research Papers* 2010 No. 4. Vienna: Vienna Institute of Demography. See also Testa, M. R. 2010. "Child-number and child-timing intentions: a micro-macro framework." REPRO-Deliverable 6.17. <http://www.oeaw.ac.at/vid/repro/cross-national.html>.

between four answers: "definitely not," "probably not," "probably yes," and "definitely yes".

The first measure can be labeled as a *child-number intention*, whereas the second one is referred to as a *child-timing intention*.

Both measures were treated as ordinal variables in the proportional odds models with random intercept, which was run separately for respondents without children and respondents with one child at the time of the interview. The choice of a stratified analysis by parity was motivated by the finding that specific childbearing preferences are determined by the actual number of children (Bulatao 1981), corresponding to a sequential nature of fertility decision-making process (Namboodiri 1972). Due to the limited sample size, this study could not include an additional set of models for the intentions of individuals with two or more children.

The multilevel framework enabled the author to study the hierarchical structure of the data with 5291 individuals nested in 99 regions, which were clustered in 31 countries (Western and Eastern Germany were kept separately). The variance of the dependent variable—either child-number or child-timing intentions—was explained with individual-level variables as well as regional- and country-level variables.

The following set of individual-level variables was included in the models: age, sex, school enrolment, level of education, marital status, employment status, household situation, church attendance and gender attitudes towards child-rearing. All these indicators pertain to the time of the survey; regretfully, no retrospective information has been collected in the Eurobarometer survey.

Two regional-level explanatory variables represented the 'fertility context' in which individuals aged 20-40 (*children generation*) were socialised: the mean actual number of children among both women and men aged 40-60 years (*parental generation*) and the proportion of women in the same age group who had their first child before their 26th birthday. The analogous variables at the country-level were the completed fertility rate and the mean age at first birth among women born in 1960. In addition, the

Gross Domestic Product (GDP) in Purchasing Power Standards (PPS) in 2006, was included as a country-level economic contextual variable, complementing the research on GDP and fertility conducted by Thévenon in WP2 (see Section 3.2).

According to the estimates of the multilevel models, short-term fertility intentions are more closely related to situational factors, such as living in a cohabiting partnership or being enrolled in education. In contrast, the total intended family size is closely linked to more enduring individual characteristics, such as religiousness. There are, however, some common predictors of both child-number and child-timing intentions. In particular, the ability to foresee what one's household situation will be like in the next one or two years increases the number of intended children as well as the certainty of planning a child in the next three years. Within the theory of planned behaviour, this can be interpreted as a signal that increased perceived behavioural control has a positive impact on fertility intentions. Moreover, the contextual social and economic factors mentioned above significantly explained the residual variance (i.e., the variance that was not explained by the individual-level factors).

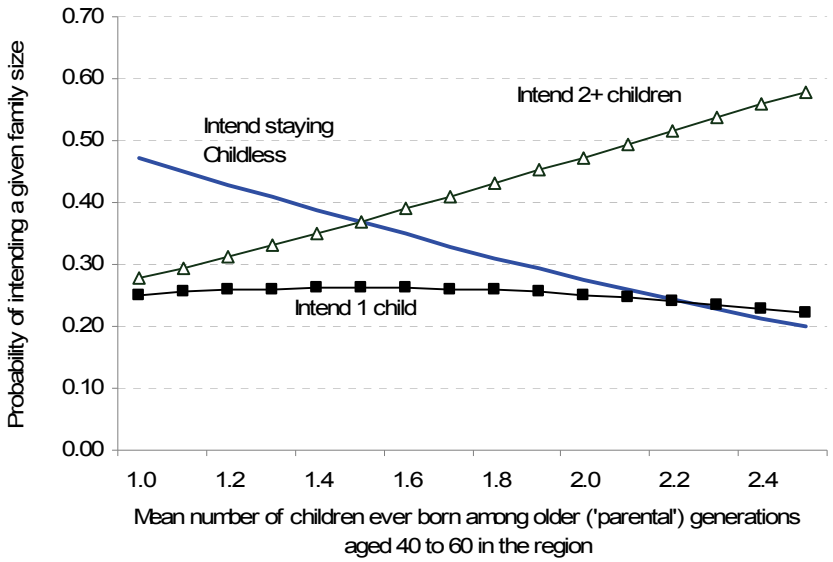
The mean actual number of children of the 'parental generation' was positively and significantly correlated with the intended number of children among the 'children generation' at the regional level (Figure 10). The country's GDP per capita showed was negatively associated with the first child intentions and positively associated with the second child intentions, if these intentions were framed in the short-term period of three years.

The findings of Maria Rita Testa's study lend support to the hypothesis discussed by Goldstein, Lutz and Testa (2003) that changing fertility ideals lag behind the changes in actual reproductive behaviour, as originally argued by Lee (1980).

Policy implications

- *Family-friendly policies may become more challenging in the future if preferences for smaller families spread in Europe as a result of the persistence of low actual fertility.*
- *Creating a climate of economic security may be a pre-condition for policies aimed at sustaining fertility levels.*

Figure 10 Effect of the mean number of children ever born among older ('parental') generation on the younger ('children') generation's individual probability of a given intended family size (childless respondents)



Source: Testa 2010, Figure 2; model computed from the 2006 *Eurobarometer* survey conducted in all the EU countries plus Croatia and Turkey.

Note: Probabilities are computed for the 'base individual' (all the individual covariates are set to the base category, while the regional-level covariates are set to the value of the southern region of the Czech Republic and the random effect is set to zero).

8.3 The effect of educational attainment on fertility tempo and quantum in Europe

(Based on WP6 study by Eva-Maria Merz and Aart C. Liefbroer (2010))[34]

The third study of WP6, conducted by Eva-Maria Merz and Aart C. Liefbroer (2010), analysed the factors that influence childlessness and the number of children among men and women who have completed their fertility. Their study focused especially on the role of educational attainment on completed family size.

This relationship has been in the focus of numerous studies during the last decades. Major theories, including the economic theories as well as the 'second demographic transition' predict that education is related to a later and lower fertility among women (Becker and Tomes 1986; Lesthaeghe 1995), in particular due to their high 'opportunity costs' of childbearing (e.g. Joshi 1998). Empirical data studied thus far clearly support this conclusion (e.g. Skirbekk 2008), although recent evidence for the Nordic countries suggests that the negative educational gradient of fertility may be weakening (Kravdal and Rindfuss 2008; Andersson et al. 2009). The expected pattern is much less clear for men, for whom higher income would lead to higher fertility among the highly educated, but a stronger emphasis on individual self-fulfilment and personal autonomy, fostered by higher education, would lead to lower fertility.

Most of the existing studies focus on one or a few countries and are therefore not able to test whether the strength of the education-fertility link differs across countries. Merz and Liefbroer's study concentrated on the following three questions:

1. Is there a negative educational gradient in the level of completed fertility across Europe?
2. If so, is this gradient stronger for women than for men?

[34] Merz, E.-M. and A.C. Liefbroer. 2011. "Report on analysis of ESS data on cross-national differences in the timing and quantum of fertility." REPRO-Deliverable 6.18. <http://www.oeaw.ac.at/vid/repro/cross-national-fertility.html>.

3. Is this gradient stronger in countries with limited possibilities to combine parenthood and employment than in countries with good infrastructure to combine work and family life?

Like the WP6 study by Liefbroer and Merz, reported in Section 8.1 above, this research used data for 25 countries, collected in the 2006 wave of the European Social Survey (ESS). More than 29 thousand respondents aged 40 and over—i.e. those who have completed or almost completed their reproduction—were included. The total number of children of the respondents was analysed in multi-level negative binomial model. The following independent variables were considered: age, sex, number of years spent in education and having ever lived with partner. Out of many possibilities of grouping European countries into larger regional clusters, a classification based on welfare regime type has been used.

The educational gradient in completed fertility size is negative in all parts of Europe. More highly educated women as well as men have on average fewer children than women and men with a lower level of education and this effect is stronger for women. The existence of the negative effect for men suggests that the impact of educational attainment in fostering lower-family size values, personal autonomy and non-family interests is stronger than the income effect that would generate a positive impact of education.

The strength of the educational gradient differs across Europe. It is weak in social-democratic welfare states (Denmark, Finland, Norway and Sweden) and in the former Soviet Union (Estonia, Latvia, Russia and Ukraine). It is particularly strong in Mediterranean countries (Cyprus, Portugal and Spain) and post-Communist countries of central and south-eastern Europe (Bulgaria, Hungary, Poland, Romania, Slovenia, Slovakia). In conservative (Austria, Belgium, France, Germany, the Netherlands and Switzerland) and liberal (Ireland and the United Kingdom) welfare states, the educational gradient is intermediate. The main difference between the social-democratic countries and the former Soviet Union is that in the latter women with both higher and lower educational degrees have relatively small

completed family size, whereas in the social-democratic welfare states both groups have comparatively higher fertility.

Policy implications

In particular in social-democratic (Nordic) welfare states, highly educated women are able to combine a career and relatively high completed fertility. Other types of welfare states are less successful in supporting highly educated women to combine these two goals. If governments aspire to facilitate the combination of employment and motherhood for both highly and less educated women, then looking at the way this is organised in social-democratic countries suggests the way to go.

9 CONCLUSIONS

The studies summarised here have provided arguably the most comprehensive view on contemporary reproductive decision-making in Europe to date. Fertility intentions and behaviour of Europeans and the factors that influence them have never been studied in so much detail and with so many diverse datasets, pertaining to individual, regional as well as country level. A strong emphasis on policy-relevant research yielded a vast array of policy recommendations, both general and specific. We have also shed light on the stylised facts posed in the Introduction. Most of the research presented here supports the idea of a 'gap' between intended and realised family size, and the longitudinal surveys clearly show that many respondents were not able to realise their childbearing intentions (WP4, Section 6). There is also a similar, although smaller 'gap' whereby a substantial number of men and women who not intend to have a child changed their intention or became 'unintentional parents' (WP4). Childbearing intentions are often uncertain, ambiguous or conditional (WP5), and therefore some changes in intentions over time are a normal part of life experience in any policy context. Therefore the aggregate gap between intentions and subsequent behaviour as well as the scope for

effective policy action may be smaller than often assumed. As WP4 research on changes in intentions across the life course shows, "people do change their expectations, and constraints do matter; but other things matter too (…) Some people decide to have fewer children than they originally wanted and some more; some find new partners and some negotiate with existing partners; some learn on the job about children and parenthood" (Iacovou and Tavares 2010).

This does not mean policies do not matter. They are of a paramount importance, not only to assist people in realising their fertility intentions, but also in providing the needed support to the parents with children and creating better conditions for the socialisation of future generations. Policies also play an important psychological role in signalling that having and rearing children is important and valued, and that parents will be supported in their endeavour (WP3). One message clearly permeates through the conclusions of all work packages: facilitating an easy combination of parenthood and work life is a key to achieving higher fertility rates and for reducing the mismatch between reproductive plans and realised fertility among many couples. The availability of formal child care for children below age 3 appears to be one of the main factors explaining cross-national differences in fertility rates (WP2, WP5, WP6).

In many countries, the 'gender revolution' has stalled half-way (Esping-Andersen 2009). Women have reached high levels of education—in fact, younger women typically outperform men in the share of university graduates—and perceive labour participation as an expected and normal part of their lives (Goldin 2006). What's more, the glass ceilings that prevented women from rising in their career positions or from achieving a high income have been cracking in the last few decades. However, this massive change in women's roles has not been matched in many places by a corresponding shift in public policies, nor in gender and family norms and practices. Three sets of factors, repeatedly identified by REPRO research and often operating jointly, form a strong barrier to the realisation of fertility desires for many women and couples and often force them to make a difficult (and

unnecessary) choice between a work career and parenthood (WP5). First, policies in many countries often remain tailored to the male-breadwinner model, providing a long period of parental leave (in effect, a maternal leave) of up to three or even four years, which facilitates long-term withdrawal of women from the labour market. For a mother with two or three children, this may add up to six or nine years of uninterrupted stay out of work, with a very difficult return thereafter. Often there are no, or only limited, facilities for couples who do not wish to follow that pathway but lack the resources to pay for a private child care: public child care for children below age 3 is frequently very limited or of a low quality, possibilities for a shorter and better-paid parental leave are nonexistent, and part-time work opportunities or flexible working practices are unavailable. This is an area that can and should be directly addressed by public policies. Second, couples in most countries continue to have a very uneven division of household and child care work, with women assuming most of the responsibility for the 'family sphere' of life. Again, this makes motherhood a difficult choice for many of them. The role of policies is less straightforward in this case, but they should encourage a more equal division of household work and childrearing, a higher involvement of men in parental leave and, possibly, their lesser involvement in paid work as well (WP6). Third, dominant norms in many countries strongly sustain the traditional (patriarchal) view that women should not work when their children are small (below age 3), that their main role is to care about their families (their labour involvement being secondary to that role) and that voluntary childlessness and childbearing outside marriage are disapproved (WP5, WP6). By sustaining strict normative expectations about women's and mothers' roles and assigning expected 'scripts' for a 'proper' behaviour, these norms again make the choice for parenthood difficult to make for many women and couples. Here, policy interventions are more difficult as trying to change prevailing norms is more controversial than, for instance, providing better child care facilities. At the same time, the theory of planned behaviour indicates how policy interventions might work to change prevailing attitudes and norms as

well as perceived behavioural control (especially WP 3). Perhaps, as WP6 concludes, using the example of the Nordic countries that "it is actually quite feasible to combine both roles, that the quality of existing child care is high and that children are not in any way harmed if they spend a considerable amount of time in such child care" might be a good way to start.

These general observations need to be interpreted within the specific context of each country. We do not propose that everyone should be encouraged to follow the same pathway, such as returning to full-time employment as soon as possible. Ideally, policies should not try to enforce just one preferred type of behaviour, but rather cater for a variety of lifestyles, living arrangements and different possibilities to combine family and non-family life, so that people with different values and preferences find it easier to plan to have children and to act on these plans. Efficient policies are also comprehensive and relatively stable over time, as this stability makes individuals' lives more predictable and gives an important anchor to couples for realising their fertility intentions (WP2, WP4, WP5, Thévenon and Gauthier 2011). Policy measures which are changed, withdrawn or modified too often are unlikely to have the desired effect, and their instability may even contribute to uncertainty of fertility intentions (WP4, WP5).

Recent increases in period fertility rates have alleviated some of the fears of extreme low fertility and depopulation in many parts of Europe. They also underlined the importance of good policies for combining work and family life, as steeper increases in fertility were observed in countries where the opportunities for women to participate in the labour market and to combine work with family have increased (WP2, Section 4). Also the negative effect of higher education on fertility is substantially reduced in welfare contexts where policies support easy access to high-quality child care and encourage an early return to employment (WP6, Section 8.3). Thus there is a clear priority in eliminating what Thévenon calls in WP2 'non-reconciliation policies'. At the same time we caution against enacting

policies whose main target is to increase the number of births. The overall effect of policies on fertility rates is limited and exaggerated expectations about their potential are unfounded (WP2, WP4). Family-related policies should not be primarily motivated by pronatalist efforts. There is neither a priority need nor a clear justification for such policies.

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APPENDIX

Appendix 1: A summary of recent cross-national studies on the effects of family policies on fertility

(Adopted from WP2 deliverable, Thévenon 2010).

The period TFR is used by three studies, Gauthier and Hatzius (1997), Adsera (2004) and D'Addio and d'Ercole (2005) to capture fertility trends, but this indicator does not capture changes in timing of childbearing. Therefore, Kalwij (2010) separately uses retrospective data on the timing of births and completed family size, while Luci and Thévenon (2011) use both period TFRs and tempo-adjusted fertility rates that estimate hypothetical period TFRs in the absence of changes in the timing of childbearing. Hilgman and Butts (2009) analyse the number of children ever born for women aged between 18 and 45 at the time of the survey.

The indicators used to account for policy variation differ across studies. A first difference lies in the way the generosity of financial support to families is captured. Both D'Addio and d'Ercole (2005) and Luci and Thévenon (2010) use the difference in net disposable income of a single-earner family with two children and average earnings compared those of a childless household with same earnings to approximate the financial support received by families. This covers family support provided through the tax system (although variations across household types are not accounted for). By contrast, both Gauthier and Hatzius (1997) and Kalwij (2010) consider the financial assistance from family benefits only. Gauthier and Hatzius measure the generosity of family benefits as a percentage of average wage; Kalwij (2010) considers the average amount of public expenditures per child below age 16 for employed women—but fiscal support is not included in his study.

As for leave policies, all the four studies considering them (Gauthier and Hatzius 1997: D'Addio and d'Ercole 2005; Hilgeman and Butts 2009: Luci and Thévenon 2011) consider the differences in the duration of leave entitlements. Luci and Thévenon consider the addition of maternity and

parental leave, while D'Addio and d'Ercole as well as Gauthier and Hatzius considered maternity leave only. Payment conditions are also assessed differently: replacement rates during maternity leave are taken into account by Gauthier and Hatzius and D'Addio-d'Ercole. Kalwij considered only the average leave-related expenditure per child below age 1, and Luci and Thévenon consider both the replacement rate obtained during maternity leave and the annual expenditures on maternity, paternity or parental leave per birth, including other birth grants as well.

Finally, Kalwij, Hilgeman and Butts as well as Luci and Thévenon used information on child care expenditures and/or enrolment of children below age 3 in formal child care. Only Luci and Thévenon included both parameters.

Table A1 The effects of family policies on fertility: Summary of cross-country studies
(WP2, Constructed by Thévenon 2010)

	Explained variable	Financial transfer	Leave entitlements			Childcare provisions		Country and period covered – methodology
			Duration	*Payment rate of maternity leave*	*Spending per child (all leave included)*	*Spending per child*	*Enrolment rates*	
Gauthier and Hatzius, 1997	Total fertility rates (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	Total fertility rates	-	Positive	-	-	-		28 OECD countries 1960-1997 - Panel data methods-
D'Addio and Mira d'Ercole, 2005	Total fertility rates	Positive	Negative	Positive	-	-		16 OECD countries 1980-1999 - Panel data methods
Hilgman 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 Completed family size	No effect No effect	Not included	-	Positive No significant effect	No effect Positive	Not included	16 European countries - Event history analysis Information on fertility history from the European Social Survey 2004
Luci and Thévenon, 2011	TFR Tempo-adjusted fertility rates	Positive	Negative	Negative	Positive	Positive	Positive	OECD countries 1982-2007 – Panel data methods

Source: WP2: Thévenon 2010 and OECD 2011 (Table 3.A1.1 in "Fertility trends: what have been the main drivers?" Ch. 3 in: *Doing Better for Families,* OECD, Paris,); based on OECD Family Database.

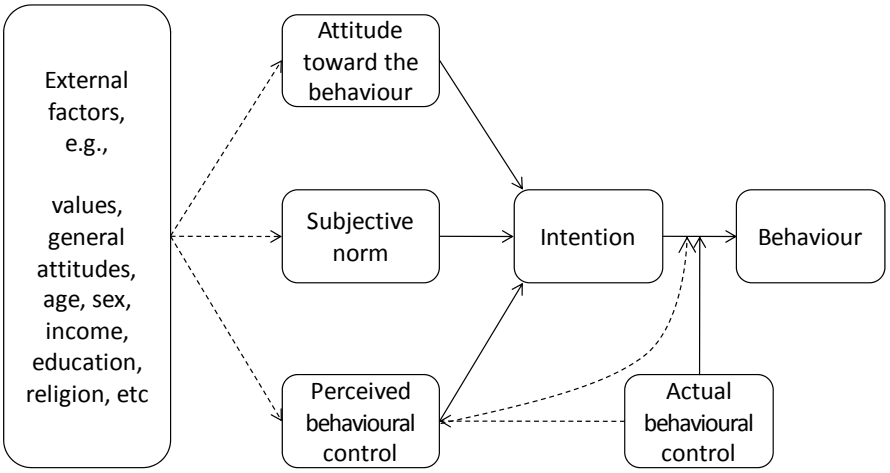
Appendix 2: The social psychology of intention formation
(Adopted from WP3 deliverable, Klobas 2010)

Theories of how people make decisions are concerned with cognitions, how people think about the object of their decisions, the world around them, and the social and personal consequences of decisions and actions. The making of decisions in their social context is of particular interest to social psychologists who study the relationship between individual cognitions, decisions and actions. One of the most important modern theories in social psychology is the theory of planned behaviour (TPB: Ajzen 1991, 2005), a theory whose elements have been of interest, over several decades, to demographers concerned with fertility decision-making. It is this theory that informs the research conducted in REPRO.

In the TPB framework, human behaviours are modelled as reflexive decisions, which are characterised as *intentions*. As Figure A1 illustrates, intentions are formed through cognitive and emotive processes which lead to three kinds of evaluations, which are commonly described as

- *Attitude* to the behaviour (people's internal evaluations that performing the behaviour will have a positive or negative outcome for them);
- *Perceived norm* (perception of external social pressures for performing the behaviour);
- *Perceived behavioural control* (PBC, people's perceptions that they are able to perform the behaviour).

Figure A1 The theory of planned behaviour, adopted from Ajzen (1991)



Of particular importance for REPRO research, the TPB may also explain how aggregate-level conditions influence the evaluation system, intention and behaviour. According to the model, intention is a *readiness* to act, which may be transformed into actual behaviours when conditions permit. PBC reflects (in part) a person's evaluation of whether those external conditions will permit them to take action. Other external factors, including psychological factors such as personality traits and values, individual differences such as age, gender, cultural background, education, income and religion, and informational factors such as past experience, knowledge and media exposure, have all been shown to influence attitudes, perceived norm and perceived behavioural control (Ajzen 2005). These factors include many of the circumstances that demographers have shown to be associated with fertility intentions and behaviour, and early research indeed demonstrated that they are likely to act as background factors. Attitudes and perceived norms have been shown to explain a significant proportion of the variance in fertility intentions and mediate the effects of such background factors as religion, religiosity and age (Jaccard and Davidson 1975). They also predict

fertility intentions better than generic psychological traits (Werner et al. 1975).

Defining intention

The key to accurate prediction of behaviour is clear and precise definition of the behaviour in terms of the *target* and *action* that define the behaviour, the *context* in which the behaviour occurs and elements of the *time* within which the behaviour occurs. When we characterise an intention to perform a behaviour as a decision, the decision to be made also needs to be defined in the same terms. Ajzen (2005) calls this the "principle of compatibility". When explaining intention to have a child, we immediately face a problem in relation to the four elements of a behaviour: "having a child" is not so much an action (behaviour) as the outcome of a set of behaviours. Nonetheless, within demography, there is a long history of research directed toward explaining or predicting intention to have a child (Billari et al. 2009; Jaccard and Davidson 1975). Similarly, the TPB has been shown to be valid for explanation of intentions to achieve outcomes (Ajzen 2005).

As noted earlier, a number of variables normally studied in fertility research, including income, education, religion and parity, become 'external' variables in social psychological studies because they are external to the cognitive structure associated with making a specific decision (Ajzen 2005). These variables often define the context within which a decision is made. A particularly important context for the prediction of childbearing intentions is parity, or the number of children that the decision-maker currently has (Morgan 1982; Yamaguchi and Ferguson 1995). Intention to have a first child is qualitatively different from the decision to have subsequent children because the decision to have a first child marks a crucial transition in one's life course, the decision to become a parent. Attitudes to having a child play a different role in the decision to have a first child as distinct from a subsequent child (Billari et al. 2009; Philipov et al. 2006). The experience of parenthood confronts people with their previous ideas and expectations

about childrearing and its consequences for their lives and often makes them rethink their fertility intentions (Regnier-Loiler 2006).

Time is a variable of particular importance in fertility decision making (Miller and Pasta 1995; Schoen et al. 1999). More powerful predictions of fertility intentions have been found when the timing of the behaviour has been specified (Philipov et al. 2006). In measuring fertility intentions, the intention to have a child is commonly measured for a pre-defined and relatively short period, typically within two years (Jaccard and Davidson 1975) or three years (Vikat et al. 2007). Better prediction of fertility intention has also been observed when the strength or level of certainty of an intention is measured (Morgan 1982; Speizer 2006; Thomson and Brandreth 1997). The strength of fertility intentions as predictors of fertility behaviour is greater when intentions are held with greater certainty (Schoen et al. 1999). Certainty of intention has been shown, in turn, to vary in at least two contexts, age and parity (Morgan 1981; Sobotka and Testa 2009: Iacovou and Tavares 2009).

Predicting intention: attitudes, normative influences, perceived behavioural control

The principle of compatibility applies to the predictors of intention as well as to the intention itself. The attitudes, perceived norms and perceptions of control that will be the best predictors of intention are those most compatible with the behaviour of interest. Studies of the effect of attitudes have demonstrated their quite strong effects on fertility intentions. Positive attitudes to childlessness among people of childbearing age are strongly correlated with intentions to remain childless (Koropeckyj-Cox and Pendell 2007). Attitudes to having a child within two years were associated with intention to have a child in the same time period in Bulgaria (Billari et al. 2009).

Studying normative influences on childbearing is an important stream of fertility research. The decision to have a child is often seen as the joint decision of two partners (Beckman et al. 1983; Miller et al. 2004;

Rosina and Testa 2009; Thomson 1997) and questions about perceptions of agreement on having a child have been standard in fertility surveys for some decades (Morgan 1985), yet demographic researchers working in the social psychological tradition have not explicitly included partners among normative referents in studies based on the TPB or the related *theory of reasoned action* (TRA, Fishbein and Ajzen 1975). Parents and other family members have been shown to be important normative referents. Mothers' preferences for their children's timing of childbirth and family size affect their children's childbearing preferences (Axinn et al. 1994) and behaviour (Barber 2000). Peers (South and Baumer 2000) and social networks (Bühler and Fratczak 2007) have also been observed to have a strong influence on childbearing intentions. These influences may be both descriptive and injunctive. Recent qualitative research has, for example, identified that girls' childbearing intentions are influenced by their friends' experiences as mothers (Bernardi et al. 2007).

Despite the link it provides to the external conditions within which fertility decisions are made, relatively little is known about the role of perceived control in formation of the intention to have a child. Some clues to the potential influence of control on fertility intentions can be found in recent literature. Aassve (2003) has observed that economic resources are associated with childbearing among young American women, and research in Singapore has confirmed the importance of financial constraints on decisions to have no more children in the island state (Call 2008), but neither of these studies has examined the cognitions associated with perceptions of behavioural control. In their study of intentions to have a child in Bulgaria, Billari et al. (2009) found that PBC had an effect on the decision to have a second child, and Dommermuth et al. (2011) in a study conducted within the REPRO framework, found that PBC explained intentions to have a child in Norway.

Appendix 3:

Table A2 Beliefs associated with the decision to have a child, classified according to the theory of planned behaviour framework

Behavioural beliefs: *costs* (negative outcomes, believes about what may be lost)
If you were to have a/another child during the next three years, would it be better or worse for ...
the possibility to do what you want
your employment opportunities
your financial situation
Behavioural beliefs: *benefits* of having a child (positive outcomes)
If you were to have a/another child during the next three years, would it be better or worse for ...
the joy and satisfaction you get from life
the care and security you may get in old age
certainty in your life
Normative beliefs
... to what extent to you agree or disagree with these statements
Most of your friends think that you should have a/another child
Your parents think that you should have a/another child
Most of your relatives think that you should have a/another child
Control beliefs: Material control
How much would the decision on whether to have a/another child during the next three years depend on the following?
Your financial situation
Your work
Your housing conditions
Control beliefs: Childcare
How much would the decision on whether to have a/another child during the next three years depend on the following?
availability of childcare
Your opportunity to go on parental leave or care leave
Control beliefs: Personal control
How much would the decision on whether to have a/another child during the next three years depend on the following?
Your health
Your having a suitable partner
Your partner's/spouse's health