

Executive Summary:

The main objective of REPRO is 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. Knowledge about fertility intentions and their realisation is particularly useful. Understanding obstacles that prevent people from realising their intentions to have a child can bring about valuable policy implications.

REPRO partners (RP) studied individuals' reproductive decision-making from a macro-, micro- and macro-micro perspective.

The Macro-Level

Rigorous studies at the macro-level were supported by the initiation and creation of a fertility database (db) and a policy db. In particular the fertility db developed well beyond the scope of REPRO and provides fertility data to a large group of interested users.

RP analysed fertility trends in European and OECD countries and came to the following important conclusions: (i) At high GDP levels, further economic development is likely to stimulate an increase of fertility rates; (ii) 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.

RP studied the impact of family policies on fertility. First a typology of the OECD countries was done to identify 4 groups of countries: Nordic countries, Anglo-Saxon countries, countries from eastern and southern Europe and other countries. Policy packages such as financial transfers, parental leave and child care were examined in detail and compared across countries.

The Micro-Level

RP pursued an innovative approach in the analyses of reproductive decision-making. They used the socio-psychological Theory of Planned Behavior. They inferred new knowledge on fertility intentions related to individuals' attitudes to having a child, the perception of social pressure and social norms and the perceived control over the consequences of having a child. Important inferences about the role of policies include that they have an impact on attitudes and social pressure beyond their conventional effect through financial support, parental leaves and childcare facilities.

Studies of the realisation of intentions revealed that some people do realise their intentions to have a child in 3 years; others postpone this intention for the next 3 years and yet others abandon the

desire to have a child. Analyses of obstacles that make people postpone or abandon their childbearing wishes revealed that policies can ease or even remove these obstacles. Changes in fertility across the life course and the role of economic uncertainty were studied in detail. In addition, qualitative studies provided in-depth information about the construction of fertility intentions; a specific typology was created which distinguished six types of intentions. The role of crucial factors such as gender roles and the work-family conflict were studied in more detail.

The Macro-Micro Level

Multi-level models were used to study the influence of economic, cultural and institutional macro-level factors on individual-level fertility attitudes and behaviour. The attention focused on 3 sets of factors: Norms concerning fertility-related behaviour, determinants of variation in fertility intentions and factors influencing childlessness, completed family size and the timing of childbearing. The findings revealed enormous differences across European countries with respect to the normative environment around the construction of childbearing intentions. While the impact of norms is weak in some countries as compared with past times, in other countries traditional norms dominate. This holds true in particular for eastern and southern European countries.

REPRO identified a range of policy implications which will be helpful for better understanding how individuals construct their intentions to have or not to have children and how policies may support the fulfilment of these decisions.

Project Context and Objectives:

Modern contraceptives assist individuals and couples who do not want to have children to accomplish this wish. However, the wish of individuals and couples to have children may not be completely within their own control; it can be impeded by social, economic, cultural, psychological and other circumstances that appear at the individual and societal level. There exists a fertility gap between people's wishes and behaviour with regard to childbearing. Its existence has been well acknowledged: the idea that "Europeans want more children than they actually have" is present in various versions in a series of documents issued by the European Union and the European Parliament, e.g. in the official communication of the European Commission from 2005 (known as Green paper) or the resolution of the European Parliament from 2008 on the demographic future of Europe. The fertility 'gap' is considered to be the result of obstacles which prevent people from having the number of children they wish to have. As the Green paper states, 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)". Hence the fertility 'gap' can be reduced by appropriate public policies.

This intuitive idea masks a range of unsolved and unclear issues whose elaboration is a prerequisite to the choice of relevant policies and their effectiveness. How is the concept of "wanted children" measured? Which factors influence choices to have or not to have children? What are the obstacles that prevent the realisation of these choices? Can policies moderate the impact of at least some of these obstacles? A search for answers to these questions inevitably shows the need for appropriate academic theories that adequately describe and explain the construction of reproductive decision-making and its relevance to policy making as well as the need for relevant methods, models and data. This knowledge not only facilitates understanding the factors that drive changes in fertility rates but also implies useful inferences for relevant policies that help people fulfil their family plans.

Main Objective

The main objective of REPRO is to fill gaps in knowledge on the factors which drive changes in fertility rates and to generate new scientific and policy-oriented knowledge on the reproductive decision-making of contemporary Europeans.

This main objective is based on the fundamental idea that knowledge on the fertility gap and fertility rates in general can be enriched by a focus on individuals' and couples' reproductive decision-making processes. A sound knowledge of these decision-making processes offers a solid foundation on which to reflect about relevant public policies. REPRO is designed to generate this knowledge. To do so, it starts from a conceptualisation of fertility in a macro-micro framework.

Objective 1: In-depth analyses of trends in timing and levels of fertility from a macro-societal perspective and scrutiny of their association with important economic, cultural and policy-related macro-level determinants.

It was reached along three main paths:

- Databases: REPRO generated two major databases: a fertility database and a policy database. Their full construction and continuous maintenance requires a lot of resources. REPRO participants successfully initialised these databases and will also maintain them beyond the project.
- Analyses of relations between fertility rates and macro-level socio-economic characteristics: Among these, an analysis of correlations between gross domestic product and fertility rates in OECD counties reached particularly useful conclusions.
- Analyses of the effect of family policies and policy packages on fertility levels.

Objective 2: A micro-level study of reproductive decision-making based on the application of the social-psychological Theory of Planned Behavior (TPB) as operationalised in the Generation and Gender Surveys (GGS) and other country-specific surveys.

This objective was based on the preliminary expectations that the socio-psychological Theory of Planned Behavior can be implemented for the analyses of reproductive decision-making. These expectations were fully realised.

The Theory of Planned Behavior was applied mainly for the analysis of intentions to have a first or second child within the next three years. Use was made of the GGS data available for eight countries. Analyses revealed the significance of the three main antecedents of fertility intentions: individual attitudes towards having a child, perceived social pressure (relatives and friends) and the perceived ability of the individual to exercise control over the fulfilment of his/her intention. These explanatory factors are new in scientific research in international comparative studies; they are new also with respect to policy implications. The TPB was also studied with respect to couples' decision-making, which is an innovative approach as well.

Objective 3: Analysis of fertility decisions and their outcomes using panel data for seven European countries in an interdisciplinary framework that includes economic, social and cultural determinants.

While the previous objective referred to understanding how people construct childbearing intentions, this one aims at understanding how people realise their constructed intentions and to identify factors that obstruct the realisation of intentions. In analogy to the previous objective this one also refers to the micro-level.

To this end, panel data were used for four European countries. The data show that some people manage to realise their short-term intentions (for having a child during the subsequent three years), while those that do not realise these short-term intentions either postpone their realisation for the next three years ("postponers") or completely abandon the intention to have that child ("abandoners"). Again, analyses centred mainly on the realisation of intentions to have a first or second child. Analyses identified a diversity of factors that impeded the realisation of intentions. Some of these factors such as divorce or separation from a partner are personal and do not need any policy action. Other factors deserve the attention of policy makers as proper policies may weaken their impact. Among these factors are employment status, level of income and housing conditions. Specific studies were carried out with respect to changes in fertility intentions over the life cycle and the impact of economic uncertainty on the realisation of intentions.

Objective 4: The use of qualitative survey data to complement and extend our understanding of fertility decision-making processes gained from the analysis of quantitative survey data.

The partners used qualitative surveys to meet this objective. An important step towards meeting the objective was the creation of an empirically grounded typology of fertility intentions. It was found to include six different components with respect to the certainty and timing of the intended birth. The typology was helpful for analysing social norms and competing life paths. Specific attention was given to a better understanding of the reasons for the "culture of childlessness" observed across European countries. The uneven advance of social change across Europe was also specifically addressed: it refers to the mismatch between stated ideals and actual practices related to childbearing and childrearing. The results also enriched the understanding of the effect of components of the Theory of Planned Behavior on the formation of fertility intentions.

Objective 5: Examine the impact of the macro-level social, economic, political, cultural and welfare environment on micro-level decision-making and behaviour.

This objective referred to an explicit study of the macro-micro link, although the effect of macro-level factors on the formation and realisation of fertility intentions was analysed in meeting objectives 2 and 3. The following studies were carried out to accomplish this objective:

- To get a better understanding of perceived norms concerning fertility-related behaviour (fertility norms) four fertility-related norms were examined. European countries differ significantly with respect to the approval of voluntary childlessness, having a child in an unmarried cohabitation and having a full-time job when the child is below age 3.
- To get a better understanding of the factors influencing child-number and child-timing intentions, intentions to have a child within the next three years as well as intentions about completed family size were analysed; the former were found to be more closely related to situational factors. The number of children that the "parental generation" had was found to be positively related to the intended number of children of the "children generation".

Objective 6: Identification of the implications of the findings of this project for policy strategies which attempt to enhance individuals' and couples' freedom of choice with regard to fertility-related behaviours.

A large set of policy implications was elaborated while meeting all the above objectives. They refer to:

- the macro-level (objective 1), the micro-level (objectives 2 and 3) and the macro-micro level (objectives 4 and 5)
- timing of a birth or number of children wanted
- comparisons of efficiency of family policy packages
- the effect of the economy (based on the GDP, economic uncertainty, etc.) on fertility levels and aggregate measures of fertility intentions
- new areas of policy interests such as social pressure and individual attitudes.

Project Results:

The findings presented in this section are reported in more detail in DL 7.20 "Synthesis and policy-relevant information". The latter is printed in the series "European Demographic Research Papers" issued by the Vienna Institute of Demography, number 1/2011.

REPRO participants report all objectives described in the previous section as successfully reached. All tasks set for reaching the objectives (specified in the project plan) were accomplished. The final result includes a set of scientific results in terms of new theories, methods and findings and detailed policy implications.

This section reports the achieved findings following the three main perspectives along which the project was developed: macro, micro and macro-micro.

1.3.1. The Macro-Perspective

This sub-section reports results reached in Work Package 2 (WP2).

Informational Background

The work along this perspective started with the preparation of the data necessary for the accomplishment of the project and the use of the achieved foreground. The macro-level informational background includes the establishment of two databases related to fertility and fertility policies:

The Human Fertility Database (HFD)

Fertility is measured by various indices. Their compatibility is a primary requirement for international analyses of fertility rates. The European countries provide statistical data on fertility that become available to users in different forms. The REPRO partners initiated the construction of a fertility database which contains fertility data for various countries. All these data have the same structure and thus permit the direct construction of indices, which users may utilise for their specific purposes. The HFD was started within the REPRO project by constructing protocols and fertility data for three countries. Due to the addition of data for a larger number of countries, the HFD rapidly transcended the REPRO requirements and continued its development under the guidance of the Max-Planck Institute for Demographic Research and the Vienna Institute of Demography. The HFD was launched in the autumn of 2009: www.humanfertility.org

Database on Family Policies and Fertility

A macro-level database on fertility, family policies and workplace practices was elaborated (DL 2.5). This database contains information on fertility trends, contextual indicators on household structure and living arrangements along with detailed information on the policy support received by families in order to compensate the economic costs of children and/or to combine work and family life. Some aggregated indicators on labour market and poverty outcomes were also included. The information was derived from various sources and international databases, above all from the OECD Family database. The database includes:

- trends in fertility and family structures for most European and OECD countries,
- indicators on public policies for families with children based on the most recent information available, along with data on working-time practices in European companies,
- macro-level indicators on the labour-market position of families and on poverty rates. This information is provided for children, adults and also at the household level.

Fertility Trends

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 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. 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.

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. REPRO 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.

The recent 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. REPRO partners concentrated especially on the role of seven broader sets of factors described briefly below: economic development, changing family-related norms, changing gender norms, attitudes and practices, changing costs of children (including housing costs that play an important role), policy influences, economic uncertainty, especially unemployment, and the rapid pace of structural changes in society. Many other factors that lie beyond of the scope of REPRO have been discussed in the literature.

Changing family-related norms and fertility is another topic of importance for understanding recent changes in fertility trends. 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.

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. 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. REPRO 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. 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 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.

Economic Development and Fertility

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.

REPRO participants 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. 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 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.

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.

Family Policies and Fertility

Many policies influencing family and reproductive behaviour 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 behaviour, 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. 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. This debate is further complicated by the fact that it is frequently impossible to disentangle the effects specific policies 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.

REPRO's contribution to understanding better the policy effects on fertility levels is based by and large on international comparisons, mainly analysing OECD rich countries. The analyses refer to a typology of countries by types of family policies and analyses of the effect of policy packages on fertility.

Typology

A well-known typology of countries by type of welfare regimes is due to Esping-Andersen (1990) . European countries were divided in three groups: Nordic countries with socialist welfare regimes; countries with liberal welfare regimes, such as the U.K., and continental countries with traditional welfare regimes. Later a fourth group emphasized the role of familism in southern European countries.

REPRO participants used the OECD Family database 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 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 countries were identified (Thévenon 2011 ;

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.

Furthermore, REPRO investigated heterogeneity of these groups, identifying many country-specific patterns. 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. REPRO 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. 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.

Policy Packages

REPRO 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 based mostly on literature review. The results are diverse, but some general conclusions can be drawn.

Financial Transfers

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.

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. 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.

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

Impact of Family Policy Packages on Fertility Trends

We examined how far fertility trends respond to family policies in OECD countries. In the light of the recent fertility rebound observed in several OECD countries, we empirically test the impact of different family policy settings on fertility, using data from 18 OECD countries that spans the years 1982 to 2007. We test the robustness of our findings by controlling for birth postponement and for different national contexts, such as economic development, women's economic empowerment, labour market insecurity and family norms.

Overall, our results confirm that fertility trends depend crucially on the opportunities for mothers to combine work and family life. Family policy packages appear as important factors to explain why fertility rates are currently and sustainably higher in countries where women have a larger access to the labour market. The different policy instruments (paid leave, childcare services and financial transfers) are found to have a cumulative influence, suggesting that a continuum of support for working parents during early childhood is likely to facilitate parents' choice to have children. Nordic European countries and France are examples of this mix. Policy levers do not have similar weight, however. We find that in-cash benefits covering the years after childbirth and the coverage of childcare services for children under age three have a larger potential influence on fertility than leave entitlements and benefits for childbirth.

1.3.2. The Micro-Perspective

The previous sub-section described REPRO results which referred to the macro-environment in which individuals make their decisions to have or not to have a child. Two settings were particularly emphasized: the economic environment and family policies. Yet different individuals experience the impact of the macro-environment in different ways as individuals have their own attributes and personal characteristics, such as age, sex, marital status, employment status, achieved education, and many others. So both the construction of childbearing intentions and their subsequent realization or frustration bears individual specifics whose study requires relevant theories and methods. REPRO research achieved considerable theoretical and methodological rigorousness in both major topics at the individual level: construction of intentions and realisation of once constructed intentions.

Formation of Fertility Intentions

This sub-section reports results achieved in WP 3.

In traditional demographic analyses fertility intentions are supposed to depend on a set of factors which are selected using fertility theories as well as available accumulated research. Usually a

regression analysis is performed where intentions are a dependent variable which is explained with variables such as age, sex, union status, education, employment, religiosity, etc. Hence it is assumed that intentions are formed under the direct influence of these factors.

Apparently this approach needs a considerable improvement; first and foremost by setting intentions and explanatory variable in a theoretical relationship rather than only in a statistical correlation. In this respect, the application of the Theory of Planned Behavior (Ajzen 1991) in REPRO is a considerable step forward in getting added knowledge on fertility intentions.

Within the framework of the TPB, the decision to have a (or another) child is framed as an intention, and intention to have a child as a function of

- attitude to having a child (decision makers' evaluations that having a child will have a positive or negative impact for them),
- perceived social or normative influences to have (or not to have) a child, and
- perceived control over factors associated with having a child (people's perceptions that they are able to have a child and to care for that child).

These three influences on having a child can be measured, in turn, by asking people about their beliefs about

- the impact of having a child ("behavioural beliefs"),
- the extent to which others want them to have a child ("normative beliefs"), and
- the extent to which both internal factors - such as one's own health - and external factors - such as employment - impede or assist with having and caring for a child ("control beliefs").

The three main antecedents of fertility intentions are on their side dependent on a range of background factors, which include diverse factors. Actually these are the factors used in traditional demographic analyses.

The Generations and Gender Survey (GGS) provided useful data for the application of the TPB. It includes questions about beliefs as well as the traditional "background" factors, and data were available for eight countries: Bulgaria, France, Georgia, Germany, Hungary, Italy, Romania, and Russia. We were able to include responses from 58,014 individuals aged between 18 and 49 in our analyses. Sample sizes ranged from 5,477 in Germany to 12,454 in Italy.

The new knowledge achieved from the application of the TPB is presented in three groups: first, related to beliefs about having another child; second, about the impact of the three antecedents on the formation of fertility intentions; and third, about the impact of macro-level factors and relevant policy implications. Analyses of the data showed that it is preferable to focus on respondents aged 25-34. Analyses of short-term intentions (to have a child during the next three years) were prevalent but long-term intentions were not disregarded.

Beliefs

Beliefs about positive outcomes were measured with a question, briefly stated as: "Do you expect having a/nother child to be better or worse for (a) joy and satisfaction; (b) care in old age; (c) certainty in life, and (d) closeness with partner. On average it was found that in all countries having a second child will bring joy and satisfaction. At the lowest level is Germany, while France and Italy were leading this list of countries. Least concerned with the outcome (b) were respondents in France and Germany while it was found of high importance in Romania and Georgia, relative to other countries. Germany is again at the bottom of the country list where the other two positive outcomes are considered; in general positive outcomes are relatively less important in this country as compared to other countries.

Beliefs about negative outcomes refer, in a similar question, to: (a) possibility to do what you want, (b) financial situation, and (c) employment opportunities. Least concerned with these outcomes were respondents in France, while the greatest concern was reported by the Bulgarian respondents.

Normative beliefs were measured with the question: "Do your (a) parents, (b) friends, (c) relatives, agree or disagree you should have another child?" The least normative pressure was reported by the German respondents while Italians were the most affected by the opinion of important members of their social network. In addition, in Italy and Georgia the prevailing norm is to have another child, while in Hungary and Germany, and to a lesser extent in Russia, it is not to have another child.

Beliefs about perceived control were analysed with caution because the GGS measured perceived constraints but not whether the respondents believe they can be overcome. Yet constraints for having a second child were found not to be important in France, and important in Romania and Bulgaria, and of little importance for females considering having their first child although important for males in Bulgaria and Russia for having a first child.

Attitudes, Norms and Control in the Decision to Have a Child

Beliefs about control are divided in two groups: material control (refers to the financial situation, housing, and work), and childcare (availability of childcare and parental leaves). The findings show

that variables that are important to people from different countries do not always influence the intention to have a child. In most countries, the more one expects positive outcomes the more likely it is to have a second child, and expected positive outcomes have the strongest effect on intentions. Subjective norms have an effect in most countries, but not in Hungary, France, and Italy. Expected negative outcomes have an effect in Romania, Georgia and France. Perceived control has an effect in Bulgaria and Russia (material control) and Italy (childcare).

Other conclusions not include:

- Parity: The decision to become a parent for the first time involves only expected positive outcomes and subjective norms in most countries.
- Age: Under 25's are more strongly influenced by possible negative outcomes than 25 to 34 year olds (Bulgaria). Under 25's are concerned about loss of freedom, while 25-34 year olds are concerned about making ends meet and finding childcare.
- Gender: Perceived control has a stronger influence for men in most countries.
- Values and general attitudes affect intentions by influencing social psychological beliefs
- Social psychological explanation of fertility intentions substantially improves our understanding of how fertility intentions are formed, increasing variance explained from around 10% (or less) for traditional variables to between 35% and 67% in different countries for different subgroups of the population based on beliefs that reflect the Theory of Planned Behavior.

Couples' Fertility Intentions: an Application of the TPB

Data for this analysis were available for Bulgaria and Italy. Available information allowed the construction of joint couple's intentions. Thus agreement and disagreement about having a child in the couple could be analysed using the TPB antecedents. This improved considerably the understanding of a couple's fertility decision-making. 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.

Macro-Level Differences and Policy Implications

To compare the ability of different macro level contexts to explain the differences we observed at the country level, we classified each country in terms of wealth (lower or higher), employment stability (lower or higher) and level of policy support for young children and their parents (lower or higher). Among countries for which we had information about the cost of housing, the split was identical to wealth, so we did not separately analyse cost of housing. Grouping by policy context provided a good explanation of the intentions to have a second child of 25 to 34 year old females with one child, regardless of whether support was low or high. It also highlighted more differences in influences on intention than grouping by either wealth or employment stability. 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 than explanations based on wealth and employment stability and, in turn, that policy interventions are likely to make a difference for women in this age group. But, here, there is a paradox. The differences highlighted by differences in policy context are not those that respond to policy: for females aged 25 to 34 in higher policy support contexts, expectations of satisfaction have a much stronger influence on the decision to have another child than they do for women in lower policy support contexts, social influences are more important, and personal control is less important. No significant differences between these two contexts were observed in the effect of attitudes to freedom, material control or perceived need for childcare on the decision to have another child, yet these are the factors that reflect policy makers' concerns with work-life balance. It appears that women in countries with stronger policy support are freed to think more about the social and emotive issues that have the strongest influence on the decision to have another child.

This is not to suggest that we should rely only on differences in policy context to explain differences in formation of intention to have a child. Looking at influences on intention from different macro level contextual viewpoints is likely to provide different insights, for example, for 25-34 year old females with one child, employment stability context provided a better explanation of concerns about material control than policy context. None of the macro level contexts that we examined explained the similarities in formation of intention to have a second child in Germany and Romania, or in Bulgaria, France, Hungary and Italy. Is there a macro-level context that prompts individuals in these countries to form intention to have their second child in much the same way, or are similarities more readily explained in terms of individual level context?

Overall, this work has shown that the formation of intention to have a child differs in quite complex ways across different individual and national contexts. Policies may need to be more closely targeted to the needs of individuals in quite specific contexts, including age group as well as parity and employment status, if they are to effectively enable and encourage Europeans to have more children.

Realisation of Intentions

This sub-section reports results achieved in WP 4.

The previous sub-section described REPRO research related to the theoretical understanding of the construction of childbearing intentions. This sub-section reports research related to the realisation of intentions. REPRO partners used exclusively panel data where these were available during the project duration. Unfortunately no panel data were available with a measurement of the TPB; hence it was impossible to check the validity of its inferences with respect to the realisation of intentions. These data will become available with the second wave of the GGS and REPRO partners expect that checks of TPB's validity will emerge as a foreground of the project.

This sub-section reports realisation of intentions in six countries where panel data were available. Four data sets could be synchronized for a joint study: Bulgaria, Hungary, the Netherlands, and Switzerland. Data for the United Kingdom and France were analysed in separate and are discussed in the second part of this sub-section.

Intentional Parents, Postponers and Abandoners

The research on this topic rested on the use of panel data for four countries: Bulgaria, Hungary, the Netherlands, and Switzerland. In the four data sets there were questions which measured an intention to have a child within a specified period of time such as two years, and data from the subsequent panel could be used to check the fulfilment of this intention. As an outcome of this check the following categories were identified and analysed:

- Intentional parents: persons who fulfilled their intention and had a child within three years
- Postponers: persons who did not have the intended child during the three years between the two waves of the panel but declared that they intend to have a child during the subsequent three years
- Abandoners: persons who did not have the intended child during the three years and at the second wave declared that they do not intend to have a child during the subsequent three years.

This categorization help understand better the influence of factors that may obstruct the realisation of intentions to have a child. The intentional parents presumably did not confront insurmountable obstacles for the realisation of their childbearing intention; postponers confronted factors that either had a temporary effect or were evaluated as surmountable within a short time, and abandoners have confronted hard constraints for the fulfilment of their intention at least during the next few years.

The categorization can have an important contribution to the understanding of contemporary fertility postponement. The latter is observed at the macro-level of fertility rates, and is measured using changes in the mean age at childbearing (by birth order). It is one of the most salient characteristic of recent fertility trends observed in all low-fertility countries. Recuperation of fertility is a trend of a relative rise in the fertility rates observed when the rise in the mean ages declines. Recuperation and postponement of fertility in OECD countries were discussed in REPRO's WP2.

The term "postponement" at the macro-level need not correspond to postponement of births by individuals. Ní Bhrolcháin and Toulemon (2005) warn that macro-level postponement, i.e. rise in the mean ages, can be the outcome of diverse changes in fertility behaviour. For example one reason for a rise in the mean ages of childbearing can be a delay in the intentions to have a child among the "intentional parents"; in this case there is no postponement at the individual level. A rise in the mean ages can appear also because of behaviour described as that of the "postponers": an intention to have a child was postponed for a later period of time and the child was born later than first intended. The latter case represents postponement proper. Other combinations are also possible.

One warning is due: according to the TPB (discussed in the previous sub-section) an intention refers to a specific action and not to the outcome of this action. In the case of intended childbearing the action is "proceptive" behaviour, which is undertaken by a couple with the purpose to achieve a pregnancy. Proceptive behaviour includes stopping use of contraceptives, or taking measures against infertility. Childbirth is an outcome of proceptive behaviour. Panel data inform about the outcome which is considered as a proxy for the proceptive behaviour.

REPRO partners analysed the three categories for four countries where the survey data were compatible: Bulgaria, Hungary, The Netherlands, and Switzerland. In these countries short-term intentions were defined for a period of 2 years (i.e. the question asked whether the respondent intended to have a child within 2 years) and measured for a period of 3 years (i.e. whether the respondent had a child during the subsequent 3 years after the first wave).

Wide differences between countries were found for the success or failure to realise childbearing intentions within specific population groups. Table 1 shows that for respondents living in a partnership (marriage or cohabitation), as many as 75% of the Dutch men and women, but fewer than one-half of Bulgarians (38%) and Hungarians (40%) managed to have an intended birth within a three-year 'follow-up' period. In these two countries, 44 and 42 percent of the respondents could be classified as postponers, while 18% abandoned their intention between the two waves of the survey.

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 the concept of 'unrealistic optimism': 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.

REPRO researchers 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, fn 9).

Further on the REPRO partners studied which factors contribute to or hinder the realisation of fertility intentions regarding the first and the second birth. The underlying argument is that certain social and demographic positions can create favourable or unfavourable circumstances for the realisation of childbearing intentions. Table 2 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, or being in the Abandoner category as contrasted to the Intentional parent.

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. 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 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.

Changes in Fertility Intentions Across the Life Course

WP4 researchers 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 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 3). The proportion of people changing their expectations is correspondingly larger below age 30, when fertility intentions are less stable.

Since a detailed description of models and results is available in Iacovou and Tavares' (2011) studies we give here only short highlights.

- Partnership status: The presence or absence of a partner is not a very important factor, in contrast to the four-country findings discussed above.

- 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
- Partner's effect: People whose partners expect more children than they themselves do are more likely to revise upwards; when the partner expects fewer children than the self, 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).
- 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.

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.

Economic Uncertainty and Fertility Intentions, Timing and Level

Economic uncertainty has been identified as one of the main explanations for delayed childbearing in Europe (Blossfeld et al. 2005). REPRO partners 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 whom 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 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 (DL 4.12) 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. 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.

Fertility Intentions and Behaviour in Context

This sub-section reports results achieved in WP 5.

The REPRO work in this work package 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 qualitative data used in REPRO were mostly collected prior to the start of the 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. Qualitative data are still rather rare in mainstream demographic research and their analysis is time-consuming. The 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).

A Typology of Declared Fertility Intentions

Researchers 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. Semi-structured 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. Six categories of fertility intentions were developed, 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 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 in education want to complete it, find a job, leave their 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.

The Emergence of a Culture of Childlessness

The countries analysed in REPRO 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 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.

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 having children they will end up seeing once in a while and for whom 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 (2010) 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.

Changing Gender Roles and Fertility Decisions

With respect to changing gender roles and fertility decisions REPRO researchers highlighted the following three interrelated dimensions as the key factors explaining individual fertility decision-making in contemporary Europe:

- Women's participation in the labour market;

- Men's involvement in unpaid family work;
- Use of non-maternal child care options.

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

The studies showed 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 REPRO, 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. 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.

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

Grandmothers are an important source of help. In Poland grandparents are often expected to help with child care from the very early stage. 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.

Men's Involvement in Child Care and Household Work

In most contexts analysed in REPRO 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. In contrast, men in France and Germany often contribute to family work. 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 it was 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.

When Values do not Fit Practices: the Uneven Advance of Social Change

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 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.

However, a mismatch between the stated ideals and actual practices may arise. In REPRO 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. Another discrepancy repeatedly identified by REPRO 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. The studies 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, research 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.

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.

1.3.3. The Macro-Level Determinants of Fertility Decision-Making

This sub-section reports results achieved in Work Package 6.

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 four sets of factors, around which the next three subsections are organised:

1. Norms concerning fertility-related behaviour (fertility norms);
2. Determinants of variation in fertility intentions;
3. Factors influencing childlessness, completed family size and the timing of childbearing;
4. Increasing our understanding about educational differences in total family size across Europe

These four broad 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.

All other WP's in REPRO report results that refer to these topics. In particular, some parts of WP6 are relatively close to the work reported in WP2 and described in sub-section (A). 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.

Perceived Norms Concerning Fertility-Related Behaviour: Cross-National Differences

Norms belong to the three cornerstones of the Theory of Planned Behavior. They fulfil an important psychological function in regulating the life course and are important for demographic decision-making. 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 examined the existence, content and cross-national variation in fertility-related norms. Their report addressed the following research questions:

- What kinds of norms exist in Europe with regard to childbearing issues?
- How large is the variation in childbearing norms across Europe?
- 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.

Variation in Childbearing Norms: Descriptive Findings

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 from 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. 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.

Variation in Childbearing Norms: Multilevel Modelling

Multilevel modelling was used to address the following two questions:

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

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 analysed norms 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 and 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. 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.

Child-Number and Child-Timing Intentions

The work reported here (based on Testa 2010) sheds 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 analysis was restricted to women and men in the prime reproductive ages, including 5291 respondents aged 20 to 39 years.

The research was based on two questions on fertility intentions included in the Eurobarometer survey:

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

The first measure can be labelled 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, corresponding to a sequential nature of fertility decision-making process. 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 in WP2.

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 Behavior, 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. 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.

Understanding Educational Differences in Total Family Size Across Europe

Although research has shown that increased educational attainment of women - and men - leads to postponement of entry into parenthood, little is known whether increased educational attainment also leads to a lower average level of completed fertility. An analysis of data on women and men aged 40 and over from the 2006 wave of the European Social Survey shed light on this issue.

First, we found that the ultimate number of children that men and women have across Europe is negatively related to their level of educational attainment. Several explanations for this could be put forward. First, the higher educated are expected to value autonomy and independence more strongly than the lower educated leading the former to prefer fewer children than the latter (the autonomy argument). Second, the higher educated are expected to spend more time with their children than the lower educated leading the former to prefer a smaller number of children than the latter (the quality argument). Third, the higher educated have a stronger preference than the lower educated to pursue a career, and to the extent that career and parenthood are difficult to reconcile, this will lead the former to decide for a smaller number of children than the latter (the incompatibility argument).

Second, we found that the negative educational gradient is stronger for women than for men. The most likely explanation for this is that the incompatibility argument is expected to be more relevant for women than for men, whereas the affordability argument is expected to be more relevant for men than for women. Together, these two processes lead one to at least expect a weaker negative gradient for men.

Third, we examined whether the negative relationship between the ultimate number of children people have and educational attainment is stronger in countries with poor arrangements to combine parenthood and employment than in countries with good arrangements to combine parenthood and employment. The negative educational gradient was weakest in countries classified as 'social-democratic' and in countries that were part of the USSR. The negative educational gradient was strongest in Mediterranean countries and in post-Communist countries. The results on Western European countries fit pretty well with expectations. In countries that fit into the social-democratic welfare regime, it will be relatively easy for women - and men - to reconcile parenthood and labour force participation, whereas this is relatively difficult in countries classified as belonging to the Mediterranean welfare regime type. The relative position of former USSR states is less clear. However, the fact that a weak educational gradient coincides with a low level of completed fertility for all educational groups, suggests that reconciliation in these societies is a difficult thing to achieve for women and men of all educational levels.

In addition, the reduction in the educational gradient across cohorts seem to be mainly caused by a drop in total number of children among women and men with low levels of educational attainment,

whereas the total number of children born to women and men with tertiary education has remained more or less constant across cohorts. This suggests that a diffusion process might be operating. Women and men with a high level of education may have reduced their number of children relatively early, and might have finalized this process among the oldest cohort in our sample. If this process of limiting one's family size diffuses to the lower educated with some time-lag, this could lead to a kind of 'catching-up' effect among the low educated born from 1945 onwards. An alternative interpretation could be that the higher educated have been more successful in striking a balance between parenthood and labour force participation than those with a low level of education.

A number of tentative implications can be outlined. First, overall, the negative educational gradient is weakest in social-democratic welfare regime countries and in countries belonging to the former USSR, but probably for quite different reasons. In countries that were formerly part of the USSR, a weak educational gradient is combined with low fertility, suggesting that all educational groups find it hard to combine parenthood and employment. In social-democratic welfare regime countries, a weak educational gradient is combined with relatively high fertility, suggesting that the 'policy package' that is available in these countries seems to facilitate all educational groups in striking a balance between work and family life. Second, the weakening of the educational gradient among women born after 1944 compared to women born before 1945 all across Western Europe seem to result for a large part from a stabilization of fertility among the higher educated and a reduction of fertility among the lower educated. Although multiple interpretations of this finding are possible, one interpretation could be that the 'policy package' to facilitate combining parenthood and employment is less effective for women - and men - with a low level of education than for those with a high level of education. If this partially results from an inability - or a perceived inability - of some lower educated groups to afford public childcare arrangements, policy makers might have a reason to reflect on this.

1.3.4. Policy Implications

REPRO analyses brought about the inference of a large list of policy implications. Details can be found in DLs 7.20 and 7.21. Below follows a synopsis from the DL 7.21:

- Policies aimed at an increase in births exercise their effect either on the formation or on the realization of childbearing intentions. Their outcomes are births or their absence. Realization or frustration of fertility intentions is an important domain for policy attention.
- Policies which aim to support the realisation of childbearing intentions need not be pro-natalistic.
- Policies should be planned, introduced and performed without sudden changes in time. They should remain stable in the long run. Thus policies contribute to the creation of a positive environment for childbearing.

- Stable policies have a positive effect on people's attitudes towards having a child, as well as on the social norms towards having children. Attitudes and perceived social norms contribute to the construction of positive intentions for childbearing.
- Traditional policy instruments such as baby bonuses or maternal and parental leaves have a limited effect on the level of fertility. Yet they might contribute to the creation of positive attitudes and social norms.
- Instability in policies may cause downward changes in intentions to have a child or construction of intentions not to have a child. The same holds for societies with high dynamics of social change.
- European societies differ significantly in welfare arrangements as well as social norms related to childbearing. Policies that have been found successful in one society will not be necessarily effective in another one. Any application of new policies or their components therefore requires a rigorous preliminary analysis.
- Monitoring fertility intentions and their realisation provides valuable information for the efficiency of policies.

Potential Impact:

1.4.1. Impact

Advancement of the State-of-the-Art

DL 7.19 presented a review of the state-of-the-art at the time of the beginning of the project. REPRO research can report the following further contributions:

- Focus on the elements of the fertility decision-making process, especially on the formation of intentions, their realisation and the factors affecting them
- REPRO extends traditional approaches where explanations of fertility and of fertility intentions are considered in separate and within the narrow framework of classical demographic approaches and findings. Instead, REPRO analyses components of the reproductive decision-making and the links among them.
- Theory-driven, using the Theory of Planned Behavior (TPB) as an overarching framework linking different disciplinary perspectives
- Traditionally fertility intentions have been studied using theories on fertility which demographers have identified as relevant. REPRO extends this approach with the use of a theory specific for intentions. Demographers' theories on fertility are used to identify the background factors of the TPB.
- Taking individual-level decisions and behaviour as paramount
- An individual's reproductive decisions are a focal point in understanding why contemporary people want or do not want to have children. Birth rates are the aggregated outcome of individuals' behaviour.
- Linking individual and aggregate-level analyses
- Individuals make their decisions in a societal environment which has an impact on decision-making and subsequent behaviour. This link requires a specific scientific approach and methods.
- Studying contextual influences by applying a comparative cross-country framework
- Societal environment differs significantly across European countries. REPRO findings include results from international comparative analyses.
- Using qualitative analysis of narrative data as an essential component
- Qualitative data were used to get deeper insight into individual's reproductive decision-making and behaviour. These findings complement successfully those reached with large-scale quantitative data.
- Employing a variety of datasets
- REPRO scientists used data where the TPB was measured as well as longitudinal panel data suited for a study of the life course.
- Addressing policy-relevant issues

A large set of policy implications was achieved, around the main message that individual fertility intentions can bring useful information to stakeholders.

Interdisciplinary Co-operation

REPRO relied on the use of theories and methods developed in a wide range of scientific disciplines.

- A key contribution is that studies of fertility intentions should be based on theories developed in social psychology.
- Another important achievement is the use of a macro-micro scientific approach.

Relevance to Stakeholders and Policies

REPRO's results are clear-cut and can serve stakeholders from many fields. The main message is that new knowledge on fertility intentions can help understand better why fertility is low, and whether family policies can be helpful towards its increase. This message does not come in the form of a systematized recipe, nor as a system of recommendations for policy action. Rather it suggests a new look towards issues related to low fertility; a new way to understand these issues.

REPRO scientists were in close contacts with OECD officers, and the Steering Board included a representative of the OECD. Close contacts were also maintained with officers from the EC who are interested in fertility in Europe.

International European Project

REPRO research was based on a multi-team framework. Scientists from more than 12 countries participated in the partnership. The consortium included partners from the "new member" states. The wide range of country participants contributed to the dissemination of knowledge across Europe.

1.4.2. Dissemination

Website, Leaflets

- The website of the REPRO project available at www.repro-project.org and www.oeaw.ac.at/vid/repro is being continuously updated. All deliverables which are aimed at a wider public are made available here as well as all conference presentations. Short summaries of all meetings are provided.
- A leaflet about the project (see Appendix A) was prepared and distributed at various meetings including the IUSSP Conference in Marrakech in September 2009, the Conference of the European Association for Population Studies (EAPS) in Vienna in 2010 and the final REPRO conference in December 2010.

- A leaflet about the fertility database (see Appendix B) was distributed, amongst others, at the EAPS Conference in Vienna, September 2010 and the final REPRO conference in December 2010.

Conference Participation

IUSSP Conference in Marrakech, September/October 2009

- In a side meeting first results are presented to the scientific community (see Appendix C for the programme).
- Public announcement of the Human Fertility Database:
 - Session 11: "Methodological and measurement advances in fertility research". This announcement relates to DL 8.23.
 - The website which is accessible at www.humanfertility.org was launched in September 2009 and maintained henceforth. It remains a joint project of the Max Planck Institute for Demographic Research (MPIDR) and the Vienna Institute of Demography (VID) even though MPIDR ceases to be a REPRO consortium member from August 2009.

EAPS Conference in Vienna, September 2010

- A special session on the REPRO project was organised (see Appendix D for the programme)
- The policies database was publicly announced.

REPRO Conference in Vienna, December 2010

Final REPRO conference was held on December 1-2, 2010 in the Theater Hall of the Austrian Academy of Sciences, Vienna (see Appendix E for the programme)

Peer-Reviewed Publications

- The following list of publications is also available from the REPRO website (<http://www.oeaw.ac.at/vid/repro/publications.html>) together with links to Abstracts or full papers. A number of more papers are in progress or under review and will appear in the next months. The website will be updated accordingly.
- Billari, F. C., A. Goisis, A. C. Liefbroer, R. A. Settersten, A. Aassve, G. Hagestad and Z. Spéder (2011). Social age deadlines for the childbearing of women and men. *Human Reproduction*, 26(3), 616-622.

- Brachet, S., M.-T. Letablier and A. Salles (2010). Devenir parents en France et en Allemagne: normes, valeurs, représentations. *Politiques Sociales et Familiales*, 100, 79-92.
- Dommermuth, L., J. Klobas and T. Lappegård (2011). Now or later? The Theory of Planned Behaviour and timing of fertility intentions. *Advances in Life Course Research*, 16(1), 42-53.
- 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.
- Mynarska, M. (2010). Deadline for parenthood: fertility postponement and age norms in Poland. *European Journal of Population*, 26(3), 351-373.
- Thévenon, O. (2011). Family policies in OECD countries: a comparative analysis. *Population and Development Review*, 37(1), 57-87.
- Thévenon, O. and A. Gauthier (2011). Family policies in developed countries: a 'fertility-booster' with side-effects. *Community, Work and Family*, 14(2).

Special Issue of "Vienna Yearbook of Population Research"

Selected conference papers of the REPRO Conference in December 2010 will be published in the peer-reviewed journal of OEAW-VID "Vienna Yearbook of Population Research" (VYPR). Two of them stem from members of the REPRO consortium. The papers are currently under review

Non-Refereed Publications

The following list of publications is also available from the REPRO website (<http://www.oeaw.ac.at/vid/repro/publications.html>) together with links to Abstracts or full papers. The website will be updated upon publication of more non-refereed publications.

- Dommermuth, L., J. Klobas and T. Lappegård. (2009). Now or later? The Theory of Planned Behavior and fertility intentions. Dondena Working Paper No. 20, Milan, Italy: Bocconi University.
- Fagnani, J. and M.-T. Letablier (2011). L'enjeu démographique dans les débats et la mise en place des réformes des politiques familiales en France et en Allemagne: 1960-2008, in: Gouazé, S., A. Salles and C. Prat-Erkert (eds.). *Les enjeux démographiques en France et en Allemagne: réalités et conséquences*. Paris: Editions du Septentrion.
- Iacovou, M. and L. Tavares (2010). Yearning, learning and conceding: (Some of) the reasons people change their childbearing intentions. ISER Working Paper 2010-22.
- 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: Vienna Institute of Demography of the Austrian Academy of Sciences.
- Luci, A. and O. Thévenon (2011). Does economic development drive the fertility rebound in OECD countries? Documents de travail 167, INED.

- 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 7. Institute of Statistics and Demography, Warsaw School of Economics.
- Pailhé A. and A. Solaz (2011). Does job insecurity cause missing births in a high fertility European country? Evidence for France. Document de travail 169, INED.
- Philipov, D., O. Thévenon, J. Klobas, L. Bernardi and A. C. Liefbroer (2009). Reproductive decision-making in a macro-micro perspective (REPRO): State-of-the-art review. European Demographic Research Papers 1. Vienna: Vienna Institute of Demography of the Austrian Academy of Sciences.
- Sobotka, Tomáš (2011). Reproductive decision-making in a macro-micro perspective (REPRO). Synthesis and policy implications. European Demographic Research Papers 1. Vienna: Vienna Institute of Demography of the Austrian Academy of Sciences.
- Testa, M. R. (2010). Child-number and child-timing intentions in a micro-macro European Framework. European Demographic Research Papers 4. Vienna: Vienna Institute of Demography of the Austrian Academy of Sciences.

Policy Briefs and Press

- The meeting of the steering board took place in the form of a Consortium meeting in Budapest in May 2010:
 - o Willem Adema (OECD)
 - o Icek Ajzen (University of Massachusetts)
 - o Jennifer Barber (University of Michigan)
 - o Anne Gauthier (University of Calgary, NIDI)
 - o Elizabeth Thomson (Stockholm University)
- There were two policy briefs published and distributed at several conferences including the Conference of the European Association for Population Studies (EAPS) in Vienna in 2010 and the final REPRO conference in December 2010. They are available on the REPRO website:
 - http://www.oeaw.ac.at/vid/repro/assets/docs/REPRO_SSH-POLICY%20BRIEF-1st-half.pdf
 - http://www.oeaw.ac.at/vid/repro/assets/docs/POLICY%20BRIEF2_final.pdf
 - Several press releases were sent out around the final REPRO conference in December 2010 in German, English and Italian (see Appendix F for two samples). Some articles appeared in the press (for example:

<http://www.oeaw.ac.at/vid/repro/assets/docs/Presse-Kinderwunsch.pdf>)

Book

A contract with the Springer publishing house exists for a book on REPRO. Its content was developed at the two last REPRO meetings in Budapest and Vienna 2010. Currently, the chapters are being written in close collaboration of the REPRO partners overseen by the editors Dimitar Philipov, Aart Liefbroer, and Jane Klobas. The book will be ready in 2011 and will appear in the beginning of 2012. See Appendix G for a description.

List of Websites:

<http://www.repro-project.org>

<http://www.oeaw.ac.at/vid/repro>

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