

# CHAPTER 1

## THE HAPPINESS COMMONALITY: FERTILITY DECISIONS IN LOW-FERTILITY SETTINGS

*Francesco C. Billari*



## 1 - INTRODUCTION

Europe has low fertility. Some parts of Europe have “very low” fertility, and others have “lowest low” fertility. This development towards unprecedented low fertility rates, which have emerged especially during the last two decades of the twentieth century, has been documented and discussed over the recent years in several studies (e.g., Kohler, Billari and Ortega 2002, Frejka et al. 2008, Sobotka 2004b, Billari and Kohler 2004, Macura, MacDonald and Haug 2005). At the turn of the new millennium, the general public and policymakers have been more than aware of the trends. As an official example, in March 2005, the European Commission devoted an official document—a Green Paper—to the issue of “Confronting demographic change: a new solidarity between the generations”. The document started as follows:

*“Europe is facing today unprecedented demographic change. In 2003, the natural population increase in Europe was just 0.04 per cent per annum; the new Member States, with the exception of Cyprus and Malta, all saw falling populations. In many countries, immigration has become vital to ensure population growth. The fertility rate everywhere is below the threshold needed to renew the population (around 2.1 children per woman), and has even fallen below 1.5 children per woman in many Member States.”* (European Commission 2005)

But what do we really know about low, lowest low, very low fertility? Even if a thorough review is beyond the scope of this paper, an introductory discussion is fundamental to paving the way for what follows. To simplify the following text, we will adopt the convention in the literature and define “lowest low” fertility as a (period) total fertility rate (TFR, number of children per woman) below 1.3, “very low” fertility as a TFR below 1.5, “low” fertility as a TFR below 2.1, i.e. the threshold of replacement between subsequent generations. A summary using seven “low fertility axioms” has been outlined in a review by Morgan and Taylor (2006). We will now provide a brief interpretation and discussion of Morgan and Taylor’s “axioms” as we find it useful to start from this systematic perspective.

First, the postponement of childbearing (i.e. the tempo or timing of fertility) is an inherent component of contemporary low fertility, including a depressive effect on currently used measures such

as the (period) TFR. Whether this postponement is a short-term phenomenon only, or if it can continue over a longer span of time, is not a matter of agreement in the scientific literature. Some researchers argue that lowest low fertility is only a temporary phenomenon due to the fact that soon or later postponement will stop, while others underline that the postponement of childbearing might continue for a considerable time, especially in presence of technological innovations (Goldstein 2006, Sobotka 2004a).

Second, fertility postponement implies lower overall fertility. While Morgan and Taylor (2006) argue that this is valid at the aggregate level, i.e. that a higher mean age at first birth is associated with lower fertility, such a claim on the macro-level association is challenged by some studies (Sobotka and Toulemon 2008). For instance, in many Eastern European countries total fertility has recently been low despite relatively early ages at first birth (Billari and Kohler 2004). On the other hand, there is consistent evidence at the individual level that having a first child later decreases total fertility, i.e. that there is a causal effect of postponing the transition to parenthood on the total number of children (Billari and Borgoni 2005, Kohler, Skytthe and Christensen 2001).

Third, fertility decisions are embedded in the life course of women and men. This includes interdependencies with education, work, physical and mental health. We do not deal in detail with this point, as it is connected to this study’s main theme of, which we will discuss more thoroughly.

Fourth, in contemporary societies parents bear high direct and indirect costs in having and rearing children. Indirect costs include primarily mother’s foregone earnings during pregnancy, childbirth and childrearing (Becker 1981). However, direct costs are also substantial and their presence is well-known to the general public. For instance, ABC news maintains a webpage with a “Cost of raising children calculator”, which “helps you estimate the cost of raising your children from their current age to age 18” (see <http://abcnews.go.com/Business/page?id=4019746>, accessed 13 December 2008). Despite the general evidence that wealth flows mostly from parents to children in contemporary societies, recent results from a study on the effect

of Italian pension reforms are consistent with the persistence of an old-age security motive for childbearing in a low fertility setting (Billari and Galasso 2008).

Fifth, legal and social norms in contemporary societies legitimate birth control. Even if the type of contraceptive method still varies widely even within a European context (Frejka 2008), including a substantial presence of traditional methods with lower efficacy such as coitus interruptus and calendar or other “natural methods” promoted for instance by the Catholic church, the idea that birth control is legitimate is not challenged at all.

Sixth, the spread of low fertility is not primarily associated with a clear increase of childlessness. Even in the early lowest low fertility countries such as Italy and Spain, as well as in many Central and Eastern European countries, the share of childless individuals might be lower than it is in countries with higher fertility (Billari and Kohler 2004).

Seventh, it is higher parity births (third and subsequent births) that are becoming increasingly rare in low fertility societies, and especially in lowest low and very low fertility societies (Kohler et al. 2002).

These seven axioms are useful to summarize the discussion about low fertility, but they only concern the empirical facts associated with low fertility. Indeed, while convincing explanations have been provided for specific cases, the question of what is the key “commonality” across all low fertility societies has been answered (Caldwell and Schindlmayr 2003). A related question about long-term relationships was raised by Hirschman (1994) who observed that no really satisfactory general explanation for fertility declines has been given in the literature.

The main idea of this article is that the quest for happiness, and the compatibility between happiness and childbearing, is the “commonality” (Caldwell and Schindlmayr 2003) that may bring an understanding of fertility differences in contemporary advanced

societies in Europe and North America. This commonality is double-sided, in a causal sense. On the one hand, happiness is a crucial determinant of childbearing. On the other, having children is one of the ways to reach happiness. As far as country differences are concerned, societies with lowest low and very low fertility are characterized by a low compatibility between happiness and childbearing.

Why would happiness be the commonality we are looking for? The pursuit of (or the improvement in) individual well-being, in the form of utility, is the tenet of the economic theory of the family (Becker 1981). In this framework, the decision to marry, to divorce or to have a(nother) child is taken when we expect to be in a better position (in other words, happier) when comparing the status after this decision has been taken with the current status. If children are considered as “consumption goods”, we have children because we derive utility from having them (Becker and Barro 1988). But can we measure this (expected) utility? The development of a true “economics of happiness” approach has been aiming, broadly speaking, at the measurement of “utility” through subjective well-being or happiness (see, for example, Frey and Stutzer 2002). This idea might indeed be linked to the literature on the “value of children” (Hoffman and Hoffman 1973, Friedman, Hechter and Kanazawa 1994). Recent developments in this literature, mostly by Bernhard Nauck and collaborators (Nauck 2007, Nauck and Klaus 2007) link the value of children to a general approach. The idea is that children provide value through a “social production function” that has as its general aims physical well-being and social esteem. Moreover, social structure is assumed to interact with the individual value of children in fertility decisions.

The importance of happiness has been underlined by some population scholars, too. John Hobcraft, for instance, noticed that research on the links between subjective well-being and demographic choices (and especially childbearing) has been much more scarce than it could have been given its potential importance (Hobcraft 2006).

## 2 - THE HAPPINESS COMMONALITY: FOUR HYPOTHESES

In this section, we outline four research hypotheses on the “happiness commonality”. The general idea is a positive link between subjective well-being and fertility. This general idea is sketched with four macro- and micro-level hypotheses. We first

introduce these hypotheses and then try to discuss their specific background. Some hypotheses are of a theoretical, and others of empirical, nature. We will not distinguish these plans of reasoning here.

H1 (macro): In rich contemporary societies, fertility is positively related with happiness at the cross-country level.

H2 (micro): A basic level of happiness is a requirement for having a child in contemporary low-fertility societies

In a rightly acknowledged paper, Hobcraft and Kiernan mention five “basic requirements” for the decision to “have a child now” (although they focus on becoming a parent, i.e. having a first child). These are “being in a partnership; having completed full-time education and training; having a home of one’s own; being in employment with an adequate income, and less concretely a sense of security” (Hobcraft and Kiernan 1995). The “sense of security” they refer to seems to refer mostly to prospects on material conditions. However, the notion of a basic requirement here is retained and the idea of the “sense of security” is extended to subjective well-being. Can happiness cause the decision to have children? The answer has not really been attacked yet in the literature. In a 1999 review of three decades of research on subjective well-being, Diener and colleagues (Diener et al. 1999) noted that the traditional causality of the link from “demographic factors” (as they state, including as diverse factors as marriage and income) to happiness, although “intuitively appealing, is by no means certain”. Therefore, they conclude, one of the emerging areas of research is on the consequences of happiness.

This second hypothesis is then formulated on the need for a basic level of happiness as a requirement for having a child now in contemporary low-fertility societies. This hypothesis concerns individual decision-making (or by a couple, although in this article the focus will be more on individual vis-à-vis society). Is there already some supporting evidence of H2? The already cited study by Bjørnskov and colleagues reports an analysis on the micro-level association between happiness and the number of children, in which a non-linear pattern can be observed: in a regression with a long list of other factors as covariates, happiness is significantly higher for individuals having had one child compared to childless individuals. It is also lower for those having had two children (but the difference is not statistically significant). There is practically no difference in happiness between individuals having three or more children and childless individuals (Bjørnskov et al. 2008). However, the broad geographical variation of the study limits

the relevance of its findings for our purposes. Another related finding is the one by Headey (2008) on longitudinal data from the German Socio-Economic Panel. Headey provides evidence that individuals who have non-zero sum life goals, such as commitment to family (children and marriage), have higher levels of subjective well-being.

One could contrast this with an opposite hypothesis, according to which children might be a choice in periods of low subjective well-being. This would be consistent with an uncertainty-reduction hypothesis, i.e. the idea that individuals and couples might have children in order to respond to current problems and to increase certainty in their lives (Friedman et al. 1994). Although this effect might be important to explain particular phenomena, such as teenage births, we speculate that the general direction is the opposite: the higher subjective well-being in a given moment, the higher the subsequent fertility. Our idea is also consistent with general findings on marital happiness (a particular dimension of happiness that has been more extensively studied in the literature). As generally children are assumed to decrease marital happiness (but not necessarily overall happiness) (McLanahan and Adams 1987, Pudrovská 2008), it might be that in some cases having a child might be seen as an answer to a problematic marriage or cohabitation. However, H2 considers that the opposite is more often the case (Waite and Lillard 1991).

H3 (micro): The perception of an increase (or a decrease) in one’s own happiness from having a child is a key factor that influences the decision to have (or not to have) a child

Through the analysis of a unique dataset of monozygotic twins, Kohler, Behrman and Skytthe (2005) showed that in Denmark becoming a parent (especially, of a boy for fathers) has a positive impact on happiness. However, the authors do not find significant effects on happiness of higher-order births. This finding is in contrast with the “set-point” theory postulating that key life events such as births do not significantly influence happiness. In line with this, we hypothesize that the perception of an increase (or a decrease) in one’s own happiness from having a child is a key factor that influences the decision to have (or not to have) a child. For this reason, the perception of a potential increase (or decrease) in happiness around the time of decision-making is more important than the actual increase (or decrease) in happiness experienced



when bearing a child. Although we can assume that individuals gather information, directly or indirectly, from other individuals on the potential effect of a child on their happiness, what is relevant is the definition of the situation. According to the “Thomas theorem”, “if men define situations as real, they are real in their consequences” (Merton 1995, Thomas and Thomas 1928)—therefore we expect that the perception that happiness will increase (or decrease) because a child is born will have consequences on fertility decision-making.

While for individuals who are already parents the expected increase (or decrease) in happiness might be linked to their own previous experience, the mechanism through which these perceptions are formed might be through “vicarious” parenthood. As Morgan and King (2001) argue, “since some of the feelings/experiences of parenthood can be experienced vicariously – albeit in diluted form, via observation and through interaction with others’ children – such experiences/observations could provide motivation for persons to have their own children”. In a test conducted across three African countries (Burkina Faso, Ghana, Kenya), Speizer (2006) analysed answers to a question posed to women of reproductive ages (“How happy would you be if you found out you were pregnant in the next few weeks?”, with answer categories happy, doesn’t matter, unhappy). The author found that feeling unhappy about becoming pregnant was indeed associated with contraceptive use, so that this measure could be considered as reflecting the extent to which women actually want to have children.

This idea is also consistent with a social production function theory of fertility (Nauck 2007, Nauck and Klaus 2007), as long as one is willing to assume, consistently with the happiness literature, that happiness is indeed the ultimate general objective of such function, as “utility” for economists. According to H3, decisions are assumed to be consistent with the maximization of expected overall happiness.

H4 (macro): the perception of an increase (or a decrease) in one’s own happiness from having a child is context-specific and can be altered by the policy environment

The relationship between happiness and childbearing, documented as mentioned above in studies such as the one by Kohler and colleagues, might be context-specific. That is, institutional settings and culture might influence this relationship. Family policies, for instance, affect individuals’ and couples’ fertility decisions in different ways in different times and places (Neyer and Andersson 2008). We can therefore expect that they also affect subjective expected increases in happiness in different ways.

A key example of a related finding is provided in a cross-sectional study of a large number of European countries using data from the European Social Survey. Aassve et al. (2008) found that parents are happier in Nordic, “Social Democratic” higher fertility countries than they are in lower fertility countries such as those of Southern and Central or Eastern Europe.

### 3 - DATA AND METHODS

Our analyses are based on a series of different, complementary, datasets, both at the macro- and micro-levels, which are consistent with the four hypotheses laid out in the last section. Macrodata on happiness and fertility are used for H1. The European Social Survey (Round 2) is used for H2. New data from the Generations and Gender Programme allow a consistent exploration of H3 and H4, based on subjective expected happiness from having children.

Regarding H1, macrodata on happiness come from the “World Database of Happiness”, a repository of survey data on the happiness of nations (Veenhoven

2008). They refer to the year 2004. Fertility data on the same year are gathered from the European Demographic Data Sheet collected by the Vienna Institute of Demography, the International Institute for Applied System Analysis and the Population Reference Bureau (VID, IIASA and PRB 2006). These fertility data include the TFR and Bongaarts-Feeney tempo-adjusted TFR (Bongaarts and Feeney 1998), a measure that corrects (under specific hypotheses that we shall not discuss here) period TFR for the technical effect of the postponement of first births mentioned in the introduction. Simple graphical methods and the calculation of correlation

coefficients are used to assess the presence of a positive association between happiness and fertility in European countries.

H2 requires data on happiness and subsequent fertility. Consistent with what is being done with H3 and H4 (i.e. a prospective approach to fertility decisions), we will look at the relationship between happiness and fertility intentions. The European Social Survey (ESS) is a biennial multi-country survey. Each biannual round contains a core module (which remains relatively constant from round to round) and two or more rotating modules. Particular efforts are posed by the research team on the international comparability of questionnaires. The ESS-2 (2004–2005) contained a specific module on “Family, work and well-being” in which questions about fertility intentions were asked. More specifically, respondents were asked “Do you plan to have a child within the next three years?” (possible answers were definitely not, probably not, probably yes, definitely yes). Moreover, questions on life satisfaction on a 0–10 score (“All things considered, how satisfied are you with your life as a whole nowadays? Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied”, question B24) and happiness also on a 0–10 score (“Taking all things together, how happy would you say you are?” question C1) are part of the core questionnaire. Extensive sampling documentation is available with the survey report (Jowell and Central Coordinating Team 2005). To investigate H2, a series of logit models on fertility intentions (in a dichotomous yes/no coding) is developed, including a number of control variables. Country-specific factors are controlled for using a series of country fixed effects. Separate analyses by gender (and subsequently by parity) are conducted. Men are studied when their age is between 18 and

50 and they are living with a partner at the time of the interview. For women, the age range is 18–45 and again they are restricted to those living with a partner.

The approach is similar to the one followed other studies that has used ESS-2 to focus on fertility decisions (Vitali et al. 2009, Mills et al. 2008), although the aim is not explicitly comparative as in the existing study. As one item measures life satisfaction and another item measures happiness, we analyse as explanatory factors the effect of each of them separately, and combine the two measures in a subjective well-being score as a factor extracted using principal components analysis from the two measures.

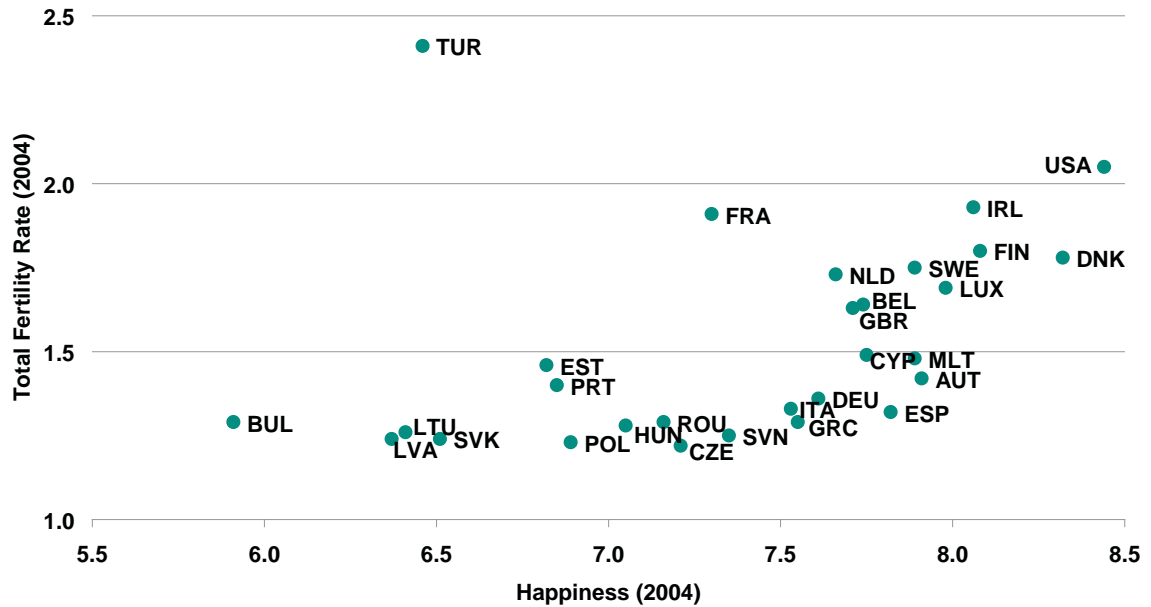
Direct measures of expected increases in happiness in the case of having a child within the next three years have been gathered in Generations and Gender Survey (Vikat et al. 2007). Appendix 1 contains the key questions from the standard questionnaire (United Nations 2005). For H3, the dependent variable will be the intention to have a(nother) child, while subjective expected happiness (as from the answer to the question Q632 item (f)) will be an explanatory variable in a series of regression models, which includes a number of control variables. Analyses were run separately for each of the countries for which the data were available at the time of this study: Bulgaria, France, Georgia, Germany, Hungary and the Russian Federation. The selection of age ranges is similar to the one outlined before for the ESS-2 (men aged 18–50, women aged 18–45). However, data from both individuals with and without partners are analysed. In order to test H4, simple descriptive statistics across the six countries will be computed and compared to fertility level.

## 4 - RESULTS

First, let us describe the results on the macrorelationship between happiness and fertility (H1). Figures I and II respectively display this relationship for the European countries for which data are available. The cross-country correlation between happiness and TFR in 2004 is .3805 (.6814 if Turkey is left out of the analysis). The cross-country correlation between happiness and the adjusted TFR in 2004 is .1787 (.3987 if Turkey is left out of

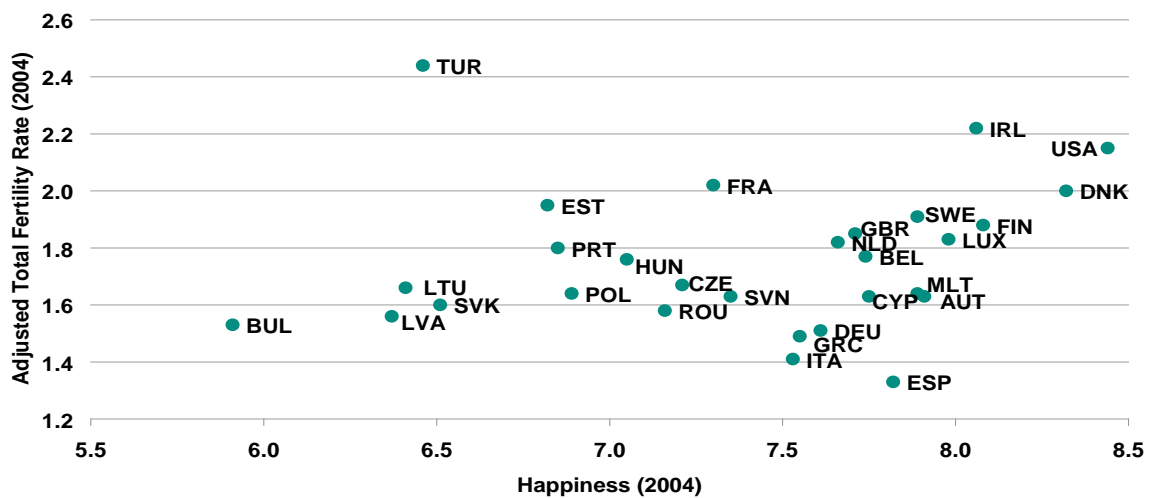
the analysis), showing that part of the relationship between happiness and fertility might be connected to tempo effects. The results are generally consistent with H1. While the lower correlation with tempo-adjusted fertility rates might prompt us to speculate that fluctuations in happiness levels may have only short-term effects on fertility, the data do not allow us to pursue this pure speculation.

**Figure I**  
Cross-country relationship between total fertility rate and happiness (2004).



Source: European Demographic Data Sheet (VID-PRB) and Veenhoven, R., World Database of Happiness, Erasmus University Rotterdam.

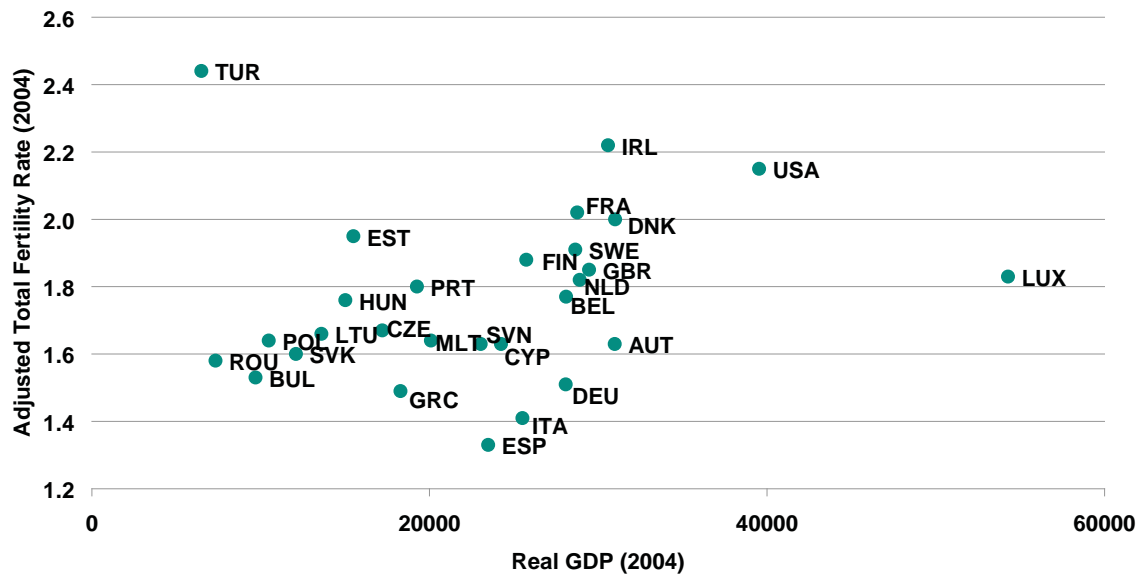
**Figure II**  
Cross-country relationship between tempo-adjusted total fertility rate and happiness (2004).



Source: European Demographic Data Sheet (VID-PRB) and Veenhoven, R., World Database of Happiness, Erasmus University Rotterdam.

Figure III

Cross-country relationship between adjusted total fertility rate and real GDP per capita (2004).



Source: European Demographic Data Sheet (VID-PRB) and Penn World Table 6.2.

To clarify the order of magnitude of this relationship, we can compare this correlation with the one between fertility and income (figure III) using data from the Penn World Table (Heston, Summers and Aten 2006). This correlation is .1932 (.4460 without Turkey) between the adjusted total fertility rate and real gross domestic product (GDP) per capita. Indeed, the correlation between real GDP per capita and happiness is high (.7756).

While the results concerning H1 are not robust on tempo effects and should not be interpreted in a causal sense, they point out to a positive relationship between fertility and well-being (both objective and subjective) at the cross-country level. These results, for instance, are consistent with the finding of a positive association between fertility and development among highly developed countries (Myrskylä et al. 2008).

The exploration of H2 on data of the ESS-2 is reported in a series of regression analyses where the dependent variable is the intention to have a child within the next three years. Table 1 shows an analysis of the effect of happiness (column 1), life satisfaction (column 2) and a combined measure of the two (column 3) on fertility intentions. Generally, results are consistent with H2: happier people are more likely to intend to have children. Controls include the effects of country, parity, age

(in a quadratic specification) of the individual and of the partner, education (in completed years), and number of rooms in the dwelling.

The effects are generally stronger for women (table 2), but they are consistently pointing towards the same direction. Analyses (not shown here) controlling for partnership duration do not show significant differences.

In table 3, only the coefficient of happiness is shown in three models specified for respondents with no children, with one child and with two children, respectively (full results are available upon request from the author). This helps in clarifying the mechanisms that may lie under H2. The effect is larger, consistently for men and women, for childless people. It remains high and statistically significant, especially for women, for individuals with one child. The effect is no longer statistically significant, and even switches sign for men. Therefore, the “precondition” to parenthood idea of Hobcraft and Kiernan (1995) seems to hold here, but is extended to second births as well. Given what happens in a low fertility context, with a high relevance of first and second births, the happiness commonality seems to become a plausible idea. Of course, there might be issues related to potential endogeneity and the lack of longitudinal data, to which we shall return in the final discussion.



**Table 1**

Logit models on fertility intentions (within-country model controlling for country fixed effects). Males. ESS 2004/05 aged 18-50 living with a partner. Column (1) includes happiness measure, column (2) includes life satisfaction and column (3) includes a subjective well-being factor extracted using principal components analysis from happiness and life satisfaction.

	(1)	(2)	(3)
<b>Happiness</b>	0.0653*** (0.0238)		
<b>Life satisfaction</b>		0.0104 (0.0201)	
<b>Subjective well-being</b>			0.0868* (0.0488)
<b>Has one child</b>	-0.475*** (0.102)	-0.479*** (0.102)	-0.477*** (0.102)
<b>Has two children</b>	-2.304*** (0.118)	-2.299*** (0.117)	-2.301*** (0.118)
<b>Has three or more children</b>	-2.227*** (0.151)	-2.234*** (0.151)	-2.231*** (0.151)
<b>Age</b>	0.593*** (0.0780)	0.591*** (0.0778)	0.591*** (0.0779)
<b>Age squared</b>	-0.00928*** (0.00116)	-0.00927*** (0.00116)	-0.00926*** (0.00116)
<b>Age of the partner</b>	0.231*** (0.0585)	0.238*** (0.0583)	0.236*** (0.0583)
<b>Age of the partner squared</b>	-0.00524*** (0.000928)	-0.00536*** (0.000926)	-0.00532*** (0.000926)
<b>Education (completed years)</b>	0.0431*** (0.0118)	0.0446*** (0.0118)	0.0436*** (0.0118)
<b>Number of rooms in the dwelling</b>	0.0409 (0.0281)	0.0483* (0.0281)	0.0444 (0.0282)
<b>Observations</b>	5162	5167	5155
<b>Number of countries</b>	25	25	25

Source: own analyses on European Social Survey wave 2.  
Standard errors in parentheses.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table 2**

Logit models on fertility intentions (within-country model controlling for country fixed effects). Females. ESS 2004/05 aged 18-45 living with a partner. Column (1) includes happiness measure, column (2) includes life satisfaction and column (3) includes a subjective well-being factor extracted using principal components analysis from happiness and life satisfaction.

	(1)	(2)	(3)
<b>Happiness</b>	0.0995*** (0.0217)		
<b>Life satisfaction</b>		0.0672*** (0.0188)	
<b>Subjective well-being</b>			0.211*** (0.0455)
<b>Has one child</b>	-0.432*** (0.0961)	-0.417*** (0.0959)	-0.424*** (0.0962)
<b>Has two children</b>	-2.204*** (0.109)	-2.173*** (0.109)	-2.188*** (0.109)
<b>Has three or more children</b>	-2.482*** (0.153)	-2.463*** (0.153)	-2.474*** (0.153)
<b>Age</b>	0.978*** (0.0679)	0.969*** (0.0678)	0.970*** (0.0680)
<b>Age squared</b>	-0.0172*** (0.00108)	-0.0170*** (0.00108)	-0.0171*** (0.00108)
<b>Age of the partner</b>	-0.0264*** (0.00827)	-0.0268*** (0.00826)	-0.0259*** (0.00828)
<b>Age of the partner squared</b>	0.0000335** (0.0000169)	0.0000340** (0.0000169)	0.0000330* (0.0000169)
<b>Education (completed years)</b>	0.0793*** (0.0118)	0.0804*** (0.0118)	0.0797*** (0.0118)
<b>Number of rooms in the dwelling</b>	0.0114 (0.0272)	0.00968 (0.0272)	0.00860 (0.0273)
<b>Observations</b>	6278	6280	6261
<b>Number of countries</b>	25	25	25

Source: own analyses on European Social Survey wave 2.  
Standard errors in parentheses.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table 3**

Logit models on fertility intentions (within-country model controlling for country fixed effects)  
 Males aged 18-50 living with a partner and females aged 18-45 living with a partner  
 Effect of happiness by current parity

	Childless	One child	Two children
<b>Males</b>	0.1477*** (0.0491)	0.0782* (0.0413)	-0.0125 (0.0490)
<b>Females</b>	0.1245*** (0.0445)	0.1439*** (0.0363)	0.0682 (0.0448)

Source: own analyses on European Social Survey wave 2.  
 Standard errors in parentheses.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 4 contains the basic results of a model in which fertility intentions are seen as a function of expected increased “joy and satisfaction in life” in Bulgaria, France, Georgia, Germany, Hungary and the Russian Federation. A large series of other explanatory variables are included in the model, and the full model results are displayed in appendix 2. In almost all cases, results are consistent with H3: individuals who perceive a greater increase in their happiness in the case that they would have a child indeed are more likely to intend to have a child. What is interesting here is the power of this variable as compared to a large number of “competing”

variables, and the pervasiveness of its effect over countries, genders, and partnership conditions. One might even suspect that the effect is so strong that this variable represents another way to measure intentions to have a child (with the exception of age, this is the only factor consistently showing up). In other words, subjective expected happiness in case of a(nother) child would be almost the same as the intention to have a(nother) child. This speaks in favour of the general relevance of the “happiness commonality”, more than in favour of H3, which seems to come empirically close to a tautology.

**Table 4**

Coefficients of a series of logit models for fertility intentions on the negative consequences of having a(nother) child on “the joy and satisfaction you get from your life” (1=much better, ... 5= much worse, see Appendix 2 question 627 item f). Column (1): all individuals; column (2): individuals with partners

	Bulgaria		France		Georgia		Germany		Hungary		Russian Federation	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<b>Men</b>												
<b>18-50:</b>	-0.796	-0.807	-0.717	-0.284	-0.458	-0.478	-1.120	-1.558	-1.451	-1.561	-0.450	-0.521
<b>coefficient</b>												
<b>s.d.</b>	.136	.236	.284	.372	.128	.183	.193	.268	.127	.142	.143	.206
<b>p-value</b>	.000	.001	.012	.445	.000	.009	.000	.000	.000	.000	.002	.011
<b>Women</b>												
<b>18-45:</b>	-0.714	-0.760	-0.939	-0.901	-0.660	-0.864	-0.709	-0.813	-1.070	-1.501	-0.497	-0.666
<b>coefficient</b>												
<b>s.d.</b>	.135	.185	.207	.245	.131	.194	.141	.213	.101	.142	.128	.169
<b>p-value</b>	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Other coefficients included in the regression: other attitude variables and subjective norms (see appendix), age and age squared, age of the partner and age of the partner squared (for individuals with partners), parity (dummy variable for zero, one, two or more children).  
 Source: own elaborations on GGS harmonized data.

**Table 5**

Mean score on the negative consequences of having a(nother) child on “the joy and satisfaction you get from your life” (1=much better, ... 5= much worse, see Appendix 2 question 627 item f).

Column (1): all individuals; column (2): individuals with partners

	Bulgaria		France		Georgia		Germany		Hungary		Russian Federation	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
<b>Men</b>												
<b>18-50:</b>	2.55	2.76	2.27	2.35	2.25	2.42	2.81	2.83	2.70	2.60	2.54	2.64
<b>mean</b>												
<b>s.d.</b>	.90	.90	1.00	1.01	.81	.82	.68	.69	.64	.73	.81	.79
<b>Women</b>												
<b>18-45:</b>	2.71	2.85	2.32	2.38	2.43	2.60	2.85	2.87	2.53	2.63	2.68	2.77
<b>mean</b>												
<b>s.d.</b>	.94	.91	1.07	1.07	.93	.91	.76	.68	.82	.75	.90	.88
<b>TFR (2000)</b>	1.27		1.89		1.46		1.38		1.33		1.19	
<b>CCFR (1960 cohort)</b>	1.95		2.11		n.a.		1.65		2.02		1.84	

Source: for attitude, own analyses of GGS harmonized datasets; for TFR (2000): GGP Contextual Database, Sobotka (2006).

If subjective expected increase in happiness is the key, then H4 on the cross-country differences in these variables becomes more relevant. Results are expressed in relation to the mean score of the answers coded so that a lower score means that individuals expect a higher increase in happiness. A value of 3 represents the midpoint. Indeed, the highest expected happiness increase is for France, which is the country with the highest fertility among

those studied. This is true both for women and for men, and independently on the partnership status. The lowest expected increase in happiness is found for Germany, the country with the lowest fertility if we look at cohort fertility. Bulgaria and the Russian Federation follow closely. H4 is therefore confirmed, and the differences in subjective expected happiness follow actual differences in fertility.

## 5 - DISCUSSION

In this article, we have argued that the quest for “happiness” is the commonality that guides fertility in contemporary societies. On the one hand, happier people have more kids if we limit our study to rich contemporary societies. On the other hand, fertility is one of the ways through which individuals achieve, or expect to achieve, a happier life. This idea has important implications for researchers and policymakers. Much of the policy discourse, for instance, is directly related to the idea that fertility is (or is not) an ultimate goal for individuals and couples. If we accept the “happiness commonality”, policies that contribute to higher level of fertility will have to make people happier and to allow happiness to increase when people have children.

The future course of happiness is then relevant also for the future course of fertility. In the literature on happiness, there are competing ideas. Some researchers argue that, although not exactly mimicking economic change, happiness has risen over the last decades and might be assumed to continue rising (Veenhoven and Hagerty 2006, Hagerty and Veenhoven 2003). Others argue that happiness is not going to increase substantially in the future (Easterlin 1974, Easterlin 2003).

Far from closing the discussion on these ideas, this article has explored a set of hypotheses under a common idea. Much further research is required to gain more understanding on the relevance of



these hypotheses, and of the general commonality, for fertility decisions. For what concerns H1, i.e. the macro-level relationship between happiness and fertility, future research possibly using cross-country panel data (or “lucky” natural experiments) should be directed towards a discussion of causal links and/or potential institutional and cultural mediating factors. On H2, although we could show that subjective well-being is positively related to fertility intentions, longitudinal data are necessary to show that there is a link also with actual fertility. The relationship between general happiness and other dimensions (in particular, marital happiness) deserves also a specific investigation. The part

concerning subjective expected increases in happiness has taken advantage from the new data of the Generations and Gender Surveys. As these surveys are planned as panels, links with effective behaviours will be a key topic of investigation. Moreover, the macro-micro connection behind H4 deserves to be investigated for a clarification of institution-related (or policy-related) mechanisms.

The direction is however clear: in the coming years, subjective well-being should play a more central role in research (and policy) concerning family and fertility behaviours.

## REFERENCES

- Aassve, A., A. Goisis, C. Ruggeri & M. Sironi. (2008). *Childbearing and Happiness across Europe*. Dondena Working Paper. Milan: Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University.
- Aassve, A., S. Mazzucco & L. Mencarini (2005). *Childbearing and Well-Being: A Comparative Analysis of European Welfare Regimes*. *Journal of European Social Policy*, 15, 283-299.
- Ariès, P. (1980). *Two Successive Motivations for the Declining Birth Rate in the West*. *Population and Development Review*, 6, 645-650.
- Becker, G. S. (1981). *A Treatise on the Family*. Cambridge, MS: Harvard University Press.
- Becker, G. S. & R. J. Barro (1988). *A Reformulation of the Economic Theory of Fertility*. *Quarterly Journal of Economics*, 103, 1-25.
- Billari, F. C. & R. Borgoni (2005). *Assessing the Use of Sample Selection Models in the Estimation of Fertility Postponement Effects*. *Statistical Methods and Applications*, 14, 389-402.
- Billari, F. C. & V. Galasso. (2008). *What explains Fertility? Evidence from Italian Pension Reforms*. In CEPR Discussion Papers. London: Centre for Economic Policy Research.
- Billari, F. C. & H. P. Kohler (2004). *Patterns of Low and Lowest-Low Fertility in Europe*. *Population Studies*, 58, 161-176.
- Bjørnskov, C., A. Dreher & J. A. V. Fischer (2008). *Cross-Country Determinants of Life Satisfaction: Exploring Different Determinants across Groups in Society*. *Social Choice and Welfare*, 30, 119-173.
- Bongaarts, J. & G. Feeney (1998). *On the Quantum and Tempo of Fertility*. *Population and Development Review*, 24, 271-291.
- Caldwell, J. C. & T. Schindlmayr (2003). *Explanations of the Fertility Crisis in Modern Societies: A Search for Commonalities*. *Population Studies*, 57, 241-263.
- Dalla Zuanna, G. (2001). *The Banquet of Aeolus: A Familistic Interpretation of Italy's Lowest Low Fertility*. *Demographic Research*, 4, 133-162.
- Del Boca, D. & D. Vuri (2007). *The Mismatch between Employment and Child Care in Italy: The Impact of Rationing*. *Journal of Population Economics*, 20, 805-832.
- Diener, E., E. M. Suh, R. E. Lucas & H. L. Smith (1999). *Subjective Well-Being: Three Decades of Progress*. *Psychological Bulletin*, 125, 276-302.
- Easterlin, R. A. (1974). *Does Economic Growth improve the Human Lot? Some Empirical Evidence*. In *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, P. A. David & M. W. Reder (Eds.), 89-125. New York: Academic Press.
- Easterlin, R. A. (1980). *Birth and Fortune. The Impact of Numbers on Personal Welfare*. New York, NY: Basic Books.
- Easterlin, R. A. (2003). *Explaining happiness*. *Proceeding of the National Academy of Sciences*, 100, 11176-11183.
- Easterlin, R. A. (2006a). *Building a Better Theory of Well-being*. In *Economics & Happiness: Framing the Analysis*, L. Bruni & P. L. Porta (Eds.), 29-64. Oxford: Oxford University Press.
- Easterlin, R. A. (2006b). *Life Cycle Happiness and its Sources Intersections of Psychology, Economics, and Demography*. *Journal of Economic Psychology*, 27, 463-482.
- Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Oxford: Polity Press.
- Esping-Andersen, G. (2007). *Family Formation and Family Dilemmas in Contemporary Europe*. Bilbao: Fundación BBVA.
- European Commission. (2005). *Green Paper "Confronting demographic change: A new Solidarity between the Generations"*. Brussels: Commission of the European Communities.
- Frejka, T. (2008). *Birth Regulation in Europe. Completing the Contraceptive Revolution*. *Demographic Research*, 19, 73-84.
- Frejka, T., T. Sobotka, J. M. Hoem & L. Toulemon. (2008). *Childbearing Trends and Policies in Europe*. In *Demographic Research*, 19, 5-14.
- Frey, B. S. & A. Stutzer (2002). *What can Economists learn from Happiness Research?* *Journal of Economic Literature*, 40, 402-434.
- Friedman, D., M. Hechter & S. Kanazawa (1994). *A Theory of the Value of Children*. *Demography*, 31, 375-401.
- Goldstein, J. R. (2006). *How Late can First Births be Postponed? Some Illustrative Population-level Calculations*. *Vienna Yearbook of Population Research*, 153-165.
- Hagerty, M. & R. Veenhoven (2003). *Wealth and Happiness Revisited: Growing National Income Does Go with Greater Happiness*. *Social Indicators Research*, 64, 1-27.
- Headey, B. (2008). *Life Goals Matter to Happiness: A Revision of Set-Point Theory*. *Social Indicators Research*, 86, 213-231.
- Heston, A., R. Summers & B. Aten. (2006). *Penn World Table Version 6.2*. Philadelphia: Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania.

- Hirschman, C. (1994). Why Fertility Changes. *Annual Review of Sociology*, 20, 203-233.
- Hobcraft, J. (2006). The ABC of Demographic Behaviour: How the Interplays of Alleles, Brains, and Contexts over the Life Course Should Shape Research Aimed at Understanding Population Processes. *Population Studies*, 60, 153-187.
- Hobcraft, J. & K. Kiernan. (1995). Becoming a Parent in Europe. In *Evolution or Revolution in European Population*. European Population Conference, 27-65. Milano: Franco Angeli.
- Hoffman, L. W. & M. L. Hoffman. (1973). The Value of Children to Parents. In *Psychological perspectives on population*, J. T. Fawcett (Eds.), 19-76. New York: Basic Books.
- Jowell, R. & Central Coordinating Team. (2005). *European Social Survey 2004/2005: Technical Report*. London: Centre for Comparative Social Surveys: City University.
- Kohler, H.-P., J. R. Behrman & A. Skytthe (2005). Partner + Children = Happiness? The Effects of Partnerships and Fertility on Well-Being. *Population and Development Review*, 31, 407-445.
- Kohler, H.-P., F. C. Billari & J. A. Ortega (2002). The Emergence of Lowest-Low Fertility in Europe During the 1990s. *Population and Development Review*, 28, 641-680.
- Kohler, H.-P. & I. Kohler (2002). Fertility Decline in Russia in the Early and Mid-1990s: The Role of Economic Uncertainty and Labour Market Crises. *European Journal of Population*, 18, 233-262.
- Kohler, H.-P., A. Skytthe & K. Christensen. (2001). The Age at First Birth and Completed Fertility reconsidered: Findings from a Sample of Identical Twins. In *MPIDR Working Paper*. Rostock: Max Planck Institute for Demographic Research.
- Lesthaeghe, R. (1995). The Second Demographic Transition in Western Countries: An Interpretation. In *Gender and Family Change in Industrialized Countries*, K. Oppenheim Mason & A.-M. Jensen (Eds.), 17-62. Oxford: Clarendon.
- Lesthaeghe, R. & D. van de Kaa. (1986). Twee demografische transitities? In *Bevolking: Groei en Krimp*, R. Lesthaeghe & D. van de Kaa (Eds.), 9-24. Deventer: Van Loghum Slaterus.
- Lutz, W., V. Skirbekk & M. R. Testa (2006). The Low Fertility Trap Hypothesis. Forces that May Lead to Further Postponement and Fewer Births in Europe. *Vienna Yearbook of Population Research*, 2006, 115-151.
- Lykken, D. & A. Tellegen (1996). Happiness is a Stochastic Phenomenon. *Psychological Science*, 7, 186-189.
- Macura, M., A. L. MacDonald & W. Haug. (2005). *The New Demographic Regime. Population Challenges and Policy Responses*. UNECE & UNFPA (Eds.). New York and Geneva: United Nations.
- McDonald, P. (2000). Gender Equity in Theories of Fertility Transition. *Population and Development Review*, 26, 427-439.
- McLanahan, S. & J. Adams (1987). Parenthood and Psychological Well-Being. *Annual Review of Sociology*, 13, 237-257.
- Merton, R. K. (1995). The Thomas Theorem and The Matthew Effect. *Social Forces*, 74, 379-424.
- Mills, M., L. Mencarini, M. L. Tanturri & K. Begall (2008). Gender Equity and Fertility Intentions in Italy and the Netherlands. *Demographic Research*, 18, 1-26.
- Morgan, S. P. & R. B. King (2001). Why Have Children in the 21st Century? Biological Predisposition, Social Coercion, Rational Choice. *European Journal of Population*, 17, 3-20.
- Morgan, S. P. & M. G. Taylor (2006). Low Fertility at the Turn of the Twenty-First Century. *Annual Review of Sociology*, 32, 375-399.
- Myrskylä, M., H.-P. Kohler & F. C. Billari. (2008). Human Development and Low Fertility. In *Population Association of America Annual Meeting*. New Orleans.
- Nauck, B. (2007). Value of Children and the Framing of Fertility: Results from a Cross-cultural Comparative Survey in 10 Societies. *European Sociological Review*, 23, 615-629.
- Nauck, B. & D. Klaus (2007). The Varying Value of Children. Empirical Results from Eleven Societies in Asia, Africa and Europe. *Current Sociology*, 55, 487-503.
- Neyer, G. R. & G. Andersson (2008). Consequences of family policies on childbearing behavior: effects or artifacts? *Population and Development Review*, 34, 699-724.
- Philipov, D., Z. Spéder & F. C. Billari (2006). Soon, Later, or Ever? The Impact of Anomie and Social Capital on Fertility Intentions in Bulgaria (2002) and Hungary (2001). *Population Studies*, 60, 289-308.
- Pudrovska, T. (2008). Psychological Implications of Motherhood and Fatherhood in Midlife: Evidence From Sibling Models. *Journal of Marriage and Family*, 70, 168-181.
- Sobotka, T. (2004a). Is Lowest-Low Fertility Explained by the Postponement of Childbearing? *Population and Development Review*, 30, 195-220.
- Sobotka, T. (2004b). *Postponement of Childbearing and Low Fertility in Europe*. Amsterdam: Dutch University Press.
- Sobotka, T. (2008). The Diverse Faces of the Second Demographic Transition in Europe. *Demographic Research*, 19, 171-224.
- Sobotka, T. & L. Toulemon (2008). *Changing Family and Partnership Behaviour. Common Trends and Persistent Diversity*

across Europe. *Demographic Research*, 19, 85-138.

Speizer, I. S. (2006). Using Strength of Fertility Motivations to Identify Family Planning Program Strategies. *International Family Planning Perspectives*, 32, 185-191.

Thomas, W. I. & D. S. Thomas. (1928). *The Child in America: Behavior Problems and Programs*. New York: Alfred A. Knopf.

United Nations (2005). *Generations and Gender Programme: Survey Instruments*. New York and Geneva: United Nations.

van de Kaa, D. J. (1987). Europe's Second Demographic Transition. *Population Bulletin*, 42, 1-59.

van de Kaa, D. J. (2004). The True Commonality: In Reflexive Modern Societies Fertility is a Derivative. *Population Studies*, 58, 77-81.

Veenhoven, R. (2008). *World Database of Happiness*. Rotterdam: Erasmus University Rotterdam.

Veenhoven, R. & M. Hagerty (2006). Rising Happiness in Nations 1946-2004. A Reply to Easterlin. *Social Indicators Research*, 79, 421-436.

VID, IIASA & PRB. (2006). *European Demographic Data Sheet*. Vienna: Vienna Institute of Demography, Austrian Academy of Sciences.

Vikat, A., Z. Speder, G. Beets, F. C. Billari, C. Buhler, A. Desesquelles et. al. (2007). *Generations and Gender Survey (GGS): Towards a Better Understanding of Relationships and Processes in the Life Course*. *Demographic Research*, 17, 389-439.

Vitali, A., F. C. Billari, A. Prskawetz & M. R. Testa (2009). Preference theory and low fertility: A comparative perspective. *European Journal of Population*, Forthcoming.

Waite, L. J. & L. A. Lillard (1991). Children and Marital Disruption. *American Journal of Sociology*, 96, 930-953.



## APPENDIX 1

### Key questions from the Generations and Gender Survey

#### Question 622

Do you intend to have a/another child during the next three years?

Possible valid answers (code): definitely not (1), probably not (2), probably yes (3), definitely yes (4)

#### Question 627

Now, suppose that during the next 3 years you were to have a/another child. I would like you to tell me what effect you think this would have on various aspects of your life. Please choose your answers from the card.

Possible valid answers (code): much better (1), better (2), neither better nor worse (3), worse (4), much worse (5).

- (a) The possibility to do what you want
- (b) Your employment opportunities
- (c) Your financial situation
- (d) Your sexual life
- (e) What people around you think of you
- (f) The joy and satisfaction you get from life
- (g) The closeness between you and your partner/spouse
- (h) Your partner's/spouse's employment opportunities

- (i) The care and security you may get in old age
- (j) Certainty in your life
- (k) The closeness between you and your parents

#### Question 629

Although you may feel that the decision to have a/another child is yours (and your partner's/spouse's) alone, it is likely that others have opinions about what you should do. I'm going to read out some statements about what other people might think about you having a/another child during the next three years. Please tell me to what extent you agree or disagree with these statements, choosing your answer from the card.

Possible valid answers (code): strongly agree (1), agree (2), neither agree nor disagree (3), disagree (4), strongly disagree (5).

- (a) Most of your friends think that you should have a/another child
- (b) Your parents think that you should have a/another child
- (c) Most of your relatives think that you should have a/another child

## APPENDIX 2

Full results of logit regression models on GGS fertility intentions  
(see Appendix 2 for the meaning of Q. 627 and Q. 629)Table 6  
Bulgaria

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 a</b>	-0.493*** (0.109)	-0.363* (0.197)	-0.338*** (0.110)	-0.301** (0.152)
<b>Q. 627 b</b>	-0.108 (0.139)	-0.346 (0.253)	-0.210* (0.116)	-0.134 (0.154)
<b>Q. 627 c</b>	-0.182 (0.112)	-0.586*** (0.190)	-0.319** (0.124)	-0.411** (0.163)
<b>Q. 627 d</b>	0.122 (0.109)	0.277 (0.230)	0.243* (0.125)	0.0428 (0.203)
<b>Q. 627 e</b>	0.0135 (0.135)	0.259 (0.232)	-0.175 (0.133)	-0.195 (0.211)
<b>Q. 627 f</b>	-0.796*** (0.136)	-0.807*** (0.237)	-0.714*** (0.135)	-0.760*** (0.185)
<b>Q. 627 g</b>	-0.00251 (0.133)	-0.433* (0.233)	-0.384*** (0.141)	-0.575*** (0.212)
<b>Q. 627 h</b>	-0.0480 (0.0899)	-0.151 (0.158)	0.177 (0.155)	-0.0636 (0.203)
<b>Q. 627 i</b>	-0.0858 (0.135)	-0.227 (0.254)	0.0933 (0.128)	0.255 (0.197)
<b>Q. 627 j</b>	-0.427*** (0.141)	-0.482* (0.256)	-0.421*** (0.133)	-0.444** (0.186)
<b>Q. 627 k</b>	0.0599 (0.118)	-0.0000920 (0.216)	0.352*** (0.133)	0.445** (0.205)
<b>Q. 629 a</b>	-0.448*** (0.111)	-0.640*** (0.191)	-0.247** (0.107)	-0.105 (0.147)
<b>Q. 629 b</b>	-0.302** (0.134)	-0.369* (0.206)	-0.423*** (0.117)	-0.395** (0.164)
<b>Q. 629 c</b>	-0.00723 (0.151)	0.207 (0.238)	-0.129 (0.143)	-0.261 (0.196)
<b>Has one child</b>	-0.333** (0.166)	-1.581*** (0.421)	-0.719*** (0.172)	-1.933*** (0.434)
<b>Has two children</b>	-1.652*** (0.265)	-2.807*** (0.474)	-2.485*** (0.268)	-3.825*** (0.494)
<b>Has three or more children</b>	-1.854*** (0.397)	-2.830*** (0.619)	-2.359*** (0.579)	-3.900*** (0.782)

**Table 6**  
Bulgaria (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Age</b>	0.672*** (0.0800)	0.259 (0.211)	0.805*** (0.106)	0.488*** (0.188)
<b>Age squared</b>	-0.0107*** (0.00127)	-0.00448 (0.00310)	-0.0143*** (0.00182)	-0.0104*** (0.00304)
<b>Age of the partner</b>		0.170 (0.208)		-0.0849 (0.133)
<b>Age of the partner squared</b>		-0.00405 (0.00341)		0.00127 (0.00179)
<b>Constant</b>	-2.503* (1.301)	6.944*** (2.567)	-3.330** (1.613)	6.342** (2.773)
<b>Observations</b>	2268	1369	2784	2063

**Table 7**  
France

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 a</b>	-0.853*** (0.255)	-1.107*** (0.352)	-0.557*** (0.208)	-0.465* (0.268)
<b>Q. 627 b</b>	-0.583* (0.310)	-0.165 (0.409)	-0.522** (0.225)	-0.827*** (0.297)
<b>Q. 627 c</b>	-0.407 (0.375)	0.207 (0.452)	-0.00727 (0.243)	0.116 (0.310)
<b>Q. 627 d</b>	-0.0317 (0.515)	0.313 (0.757)	0.279 (0.260)	0.544 (0.346)
<b>Q. 627 e</b>	0.159 (0.342)	0.259 (0.379)	-0.239 (0.227)	-0.0846 (0.277)
<b>Q. 627 f</b>	-0.717** (0.284)	-0.284 (0.372)	-0.939*** (0.207)	-0.901*** (0.245)
<b>Q. 627 g</b>	0.106 (0.312)	-0.192 (0.458)	-0.175 (0.244)	-0.460 (0.309)
<b>Q. 627 h</b>	-0.198 (0.360)	-0.588* (0.345)	-0.750*** (0.243)	-0.468 (0.365)
<b>Q. 627 i</b>	0.177 (0.241)	0.571 (0.383)	0.889*** (0.231)	1.045*** (0.319)
<b>Q. 627 j</b>	-0.642** (0.292)	-1.373*** (0.409)	-0.738*** (0.233)	-0.615** (0.293)
<b>Q. 627 k</b>	0.0882 (0.344)	-0.0522 (0.463)	0.214 (0.294)	-0.0769 (0.370)

**Table 7**  
France (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 629 a</b>	-0.443** (0.181)	-0.412* (0.232)	-0.618*** (0.162)	-0.605*** (0.185)
<b>Q. 629 b</b>	-0.0119 (0.172)	0.0972 (0.226)	-0.275** (0.137)	-0.0523 (0.165)
<b>Q. 629 c</b>	0.0470 (0.186)	0.248 (0.252)	0.375** (0.189)	0.221 (0.223)
<b>Has one child</b>	0.177 (0.572)	-0.117 (0.590)	0.433 (0.413)	0.153 (0.460)
<b>Has two children</b>	0.00225 (0.567)	-1.083 (0.732)	-0.258 (0.527)	-0.510 (0.611)
<b>Has three or more children</b>	1.069 (0.960)	0.686 (1.296)	-1.745** (0.833)	-2.068** (0.957)
<b>Age</b>	0.722*** (0.192)	0.725* (0.377)	0.951*** (0.232)	0.634 (0.451)
<b>Age squared</b>	-0.0107*** (0.00277)	-0.0105** (0.00515)	-0.0152*** (0.00397)	-0.00954 (0.00779)
<b>Age of the partner</b>		1.618*** (0.564)		-0.00321 (0.241)
<b>Age of the partner squared</b>		-0.0269*** (0.00919)		-0.000449 (0.00352)
<b>Constant</b>	-1.034 (4.888)	-27.12*** (9.244)	-4.757 (3.545)	-0.855 (5.782)
<b>Observations</b>	354	211	525	314

**Table 8**  
Georgia

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 a</b>	-0.181 (0.133)	-0.240 (0.202)	-0.339*** (0.117)	-0.421** (0.189)
<b>Q. 627 b</b>	-0.362** (0.141)	-0.191 (0.220)	-0.180 (0.132)	-0.0394 (0.210)
<b>Q. 627 c</b>	-0.467*** (0.109)	-0.632*** (0.181)	-0.0863 (0.125)	-0.309 (0.195)
<b>Q. 627 d</b>	-0.251* (0.150)	-0.920** (0.387)	0.201 (0.150)	0.230 (0.295)
<b>Q. 627 e</b>	-0.117 (0.133)	-0.0614 (0.218)	-0.259** (0.131)	-0.299 (0.205)



**Table 8**  
Georgia (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 f</b>	-0.458*** (0.128)	-0.478*** (0.183)	-0.660*** (0.131)	-0.864*** (0.194)
<b>Q. 627 g</b>	-0.118 (0.130)	-0.0762 (0.206)	-0.0758 (0.128)	0.0168 (0.186)
<b>Q. 627 h</b>	0.104 (0.0923)	0.135 (0.146)	-0.250* (0.130)	-0.272 (0.185)
<b>Q. 627 i</b>	0.0239 (0.173)	-0.300 (0.256)	0.137 (0.181)	0.327 (0.248)
<b>Q. 627 j</b>	0.0909 (0.182)	0.384 (0.245)	-0.0210 (0.178)	-0.264 (0.252)
<b>Q. 627 k</b>	0.0274 (0.131)	0.104 (0.230)	0.289** (0.128)	0.0852 (0.219)
<b>Q. 629 a</b>	-0.647*** (0.136)	-0.506** (0.229)	-0.434*** (0.127)	-0.278 (0.183)
<b>Q. 629 b</b>	-0.473*** (0.140)	-0.512** (0.228)	-0.495*** (0.151)	-0.597*** (0.221)
<b>Q. 629 c</b>	-0.108 (0.173)	-0.402 (0.264)	-0.308* (0.169)	-0.412* (0.250)
<b>Has one child</b>	0.357* (0.211)	-18.93*** (2.539)	0.192 (0.193)	-2.589** (1.120)
<b>Has two children</b>	-1.049*** (0.201)	-20.30*** (2.576)	-1.057*** (0.195)	-3.914*** (1.119)
<b>Has three or more children</b>	-1.582*** (0.312)	-20.79*** (2.581)	-1.807*** (0.386)	-4.572*** (1.177)
<b>Age</b>	0.518*** (0.0677)	-0.00850 (0.168)	0.442*** (0.0913)	0.0841 (0.191)
<b>Age squared</b>	-0.00792*** (0.00102)	-0.000230 (0.00228)	-0.00807*** (0.00149)	-0.00211 (0.00301)
<b>Age of the partner</b>		0.176 (0.161)		0.0822 (0.179)
<b>Age of the partner squared</b>		-0.00393 (0.00248)		-0.00190 (0.00247)
<b>Constant</b>	0.547 (1.167)	29.35 (0)	1.346 (1.441)	10.62*** (3.088)
<b>Observations</b>	2091	1247	2038	1321

**Table 9**  
Germany

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 a</b>	-0.448*** (0.145)	-0.486** (0.198)	-0.391*** (0.130)	-0.248 (0.174)
<b>Q. 627 b</b>	-0.529*** (0.157)	-0.551** (0.277)	-0.132 (0.123)	-0.122 (0.154)
<b>Q. 627 c</b>	-0.511*** (0.149)	-0.586*** (0.204)	-0.414*** (0.131)	-0.466** (0.182)
<b>Q. 627 d</b>	0.145 (0.192)	-0.185 (0.295)	-0.292 (0.249)	-0.512 (0.386)
<b>Q. 627 e</b>	0.00121 (0.200)	-0.541 (0.340)	0.261 (0.231)	0.470 (0.299)
<b>Q. 627 f</b>	-1.200*** (0.193)	-1.558*** (0.268)	-0.709*** (0.141)	-0.813*** (0.212)
<b>Q. 627 g</b>	-0.312* (0.181)	-0.0760 (0.277)	-0.439** (0.173)	-0.0997 (0.229)
<b>Q. 627 h</b>	0.329** (0.137)	0.0717 (0.186)	-0.0102 (0.287)	-0.00685 (0.343)
<b>Q. 627 i</b>	0.0245 (0.172)	-0.244 (0.241)	-0.0103 (0.156)	-0.315 (0.232)
<b>Q. 627 j</b>	-0.0319 (0.174)	0.0574 (0.264)	-0.238 (0.194)	-0.445 (0.276)
<b>Q. 627 k</b>	0.0518 (0.195)	0.246 (0.317)	0.0342 (0.189)	0.197 (0.295)
<b>Q. 629 a</b>	-0.150** (0.0745)	-0.0755 (0.101)	-0.0970 (0.0596)	-0.0828 (0.0693)
<b>Q. 629 b</b>	-0.176** (0.0729)	-0.195** (0.0851)	-0.0764 (0.0661)	-0.165* (0.0854)
<b>Q. 629 c</b>	-0.0171 (0.0769)	0.00805 (0.0981)	-0.180** (0.0725)	-0.0586 (0.0987)
<b>Has one child</b>	0.119 (0.244)	-0.609* (0.329)	-0.00681 (0.199)	-0.473* (0.268)
<b>Has two children</b>	-1.229*** (0.341)	-2.014*** (0.438)	-1.139*** (0.250)	-1.593*** (0.312)
<b>Has three or more children</b>	-2.113*** (0.760)	-2.888*** (0.905)	-2.136*** (0.540)	-2.732*** (0.665)
<b>Age</b>	0.951*** (0.138)	0.566** (0.284)	1.014*** (0.138)	0.676*** (0.228)
<b>Age squared</b>	-0.0153*** (0.00214)	-0.00858** (0.00404)	-0.0179*** (0.00229)	-0.0128*** (0.00365)

**Table 9**  
Germany (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
Age of the partner		0.416 (0.294)		0.456*** (0.168)
Age of the partner squared		-0.00829* (0.00456)		-0.00707*** (0.00244)
Constant	-6.464*** (2.358)	-1.279 (5.257)	-5.726** (2.441)	-7.044* (3.783)
Observations	1574	993	2096	1321

**Table 10**  
Hungary

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
Q. 627 a	-0.0223 (0.118)	0.118 (0.133)	-0.137 (0.0878)	-0.0784 (0.124)
Q. 627 b	-0.230 (0.165)	-0.146 (0.191)	-0.140* (0.0833)	-0.172 (0.120)
Q. 627 c	-0.809*** (0.114)	-0.895*** (0.127)	-0.394*** (0.0952)	-0.312** (0.136)
Q. 627 d	-0.150 (0.186)	-0.124 (0.206)	-0.220 (0.149)	-0.121 (0.268)
Q. 627 e	0.436*** (0.161)	0.201 (0.193)	-0.109 (0.137)	-0.243 (0.227)
Q. 627 f	-1.451*** (0.127)	-1.561*** (0.142)	-1.070*** (0.101)	-1.501*** (0.142)
Q. 627 g	-0.279** (0.134)	-0.406*** (0.154)	-0.198** (0.0996)	-0.208 (0.148)
Q. 627 h	0.210** (0.100)	0.228** (0.110)	-0.0626 (0.193)	0.185 (0.279)
Q. 627 i	-0.159 (0.112)	-0.0825 (0.127)	-0.101 (0.0890)	-0.171 (0.132)
Q. 627 k	0.323** (0.150)	0.297 (0.185)	0.0274 (0.106)	0.0153 (0.186)
Q. 629 a	-0.123** (0.0509)	-0.0787 (0.0551)	-0.0515 (0.0359)	-0.0475 (0.0515)
Q. 629 b	-0.0506 (0.0474)	-0.0646 (0.0496)	-0.0514 (0.0349)	-0.0792 (0.0525)
Q. 629 c	-0.0197 (0.0588)	-0.0285 (0.0643)	-0.0544 (0.0434)	-0.0429 (0.0627)

**Table 10**  
Hungary (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
Has one child	-0.400** (0.189)	-0.416* (0.220)	-0.463*** (0.147)	-0.723*** (0.226)
Has two children	-1.757*** (0.209)	-1.686*** (0.235)	-1.762*** (0.179)	-2.077*** (0.257)
Has three or more children	-1.681*** (0.235)	-1.644*** (0.255)	-1.922*** (0.245)	-2.254*** (0.311)
Age	0.838*** (0.0955)	0.609*** (0.131)	1.083*** (0.107)	0.814*** (0.175)
Age squared	-0.0120*** (0.00134)	-0.00803*** (0.00180)	-0.0173*** (0.00170)	-0.0130*** (0.00266)
Age of the partner		-0.0417 (0.114)		0.121 (0.102)
Age of the partner squared		-0.000765 (0.00167)		-0.00200 (0.00133)
Constant	-6.967*** (1.833)	-1.328 (2.208)	-8.772*** (1.836)	-5.672* (2.932)
Observations	2189	1951	3077	2058

**Table 11**  
Russian Federation

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
Q. 627 a	-0.102 (0.126)	-0.160 (0.182)	-0.120 (0.122)	-0.144 (0.163)
Q. 627 b	-0.119 (0.167)	-0.563** (0.223)	0.163 (0.134)	0.209 (0.177)
Q. 627 c	-0.180 (0.141)	-0.00415 (0.195)	-0.570*** (0.134)	-0.551*** (0.169)
Q. 627 d	0.237* (0.143)	0.431* (0.223)	-0.107 (0.164)	-0.294 (0.248)
Q. 627 e	0.132 (0.162)	-0.0245 (0.231)	0.416** (0.163)	0.750*** (0.214)
Q. 627 f	-0.450*** (0.143)	-0.521** (0.206)	-0.497*** (0.128)	-0.666*** (0.169)
Q. 627 g	-0.356** (0.140)	-0.524*** (0.202)	-0.205 (0.125)	-0.295* (0.174)
Q. 627 h	0.0306 (0.113)	-0.0709 (0.154)	-0.410*** (0.143)	-0.350** (0.175)

**Table 11**  
Russian Federation (continued)

	Males (all)	Males (with co-resident partner)	Females (all)	Females (with co-resident partner)
<b>Q. 627 i</b>	-0.0851 (0.170)	0.0239 (0.205)	-0.0491 (0.145)	-0.145 (0.193)
<b>Q. 627 j</b>	-0.582*** (0.169)	-0.383* (0.219)	-0.202 (0.161)	-0.132 (0.212)
<b>Q. 627 k</b>	0.162 (0.144)	0.155 (0.203)	0.249* (0.138)	0.0530 (0.187)
<b>Q. 629 a</b>	-0.195* (0.101)	-0.222* (0.125)	-0.348*** (0.110)	-0.409*** (0.157)
<b>Q. 629 b</b>	-0.250* (0.143)	-0.411** (0.189)	-0.0757 (0.116)	-0.118 (0.139)
<b>Q. 629 c</b>	-0.492*** (0.153)	-0.306 (0.208)	-0.408*** (0.139)	-0.318* (0.188)
<b>Has one child</b>	-0.247 (0.227)	-1.387*** (0.394)	-0.789*** (0.211)	-1.180*** (0.317)
<b>Has two children</b>	-1.153*** (0.297)	-2.300*** (0.461)	-2.300*** (0.310)	-2.808*** (0.429)
<b>Has three or more children</b>	-0.588 (0.369)	-1.662*** (0.546)	-1.621*** (0.461)	-1.923*** (0.547)
<b>Age</b>	0.669*** (0.110)	0.412* (0.231)	0.542*** (0.120)	0.233 (0.191)
<b>Age squared</b>	-0.0110*** (0.00173)	-0.00607* (0.00344)	-0.00988*** (0.00201)	-0.00456 (0.00310)
<b>Age of the partner</b>		0.409* (0.224)		0.276 (0.204)
<b>Age of the partner squared</b>		-0.00842** (0.00369)		-0.00472 (0.00310)
<b>Constant</b>	-3.732** (1.828)	-3.008 (3.608)	-0.258 (1.786)	1.275 (3.032)
<b>Observations</b>	1606	1024	1877	1245