Expected happiness from childbearing and its realization

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Abstract

Using longitudinal data from the Generations and Gender Surveys (for Bulgaria, France and Italy) we study the determinants of predicted happiness associated with childbearing and then its role for explaining realized childbearing. "Expected happiness" as declared by individuals, is indeed a powerful predictor of their fertility behavior. Those who expect to be happier from childbearing, have indeed a much higher probability of having a child within the next three years. But the results also show strong gender and country differences in the level of expected happiness and its effect on fertility behavior. For instance, in Italy we see that individuals tend to have a strong association between expected happiness with childbearing, whereas realized fertility is low. What separates this study from recent papers considering happiness and fertility, is that in the GGS the question about happiness is specific with respect to childbearing. Previous studies tend to focus on overall happiness, which has the drawback of first - having relatively low variation in responses, and second - it refers to the general level of happiness, which incorporates a whole range of factors - not only children.

* The authors gratefully acknowledge financial support from the European Research Council under the European ERC Grant Agreement no StG-313617 (SWELL-FER: Subjective Well-being and Fertility, P.I. Letizia Mencarini).

1. Introduction

Low fertility has important implications for our societies, and given its persistency, scholars and policy makers have taken a strong interest in explaining its pattern and trends. Traditional theories concerning demographic transition have not been particularly successful in explaining contemporary fertility trends, and they certainly fail to explain persistent below-replacement fertility levels as we observe in so many societies (see Balbo et al 2012 for a review). A recent addition to the analysis of fertility trends concerns that of subjective wellbeing. This is an interesting development in demographic analysis, since having children is increasingly viewed as part of a series of choices aimed at the self-realization of the individual. As a result, Billari and Kohler (2009) make the suggestion that subjective wellbeing might be the "missing link" and possibly the communality that links fertility choices with individuals' quest for happiness and satisfaction. This paper follows up on this strand of the literature, but differently from existing studies, which predominantly use a general measure of happiness as the dependent variable and where the number and the age of children are included as explanatory variables, we consider here the way individuals predict their happiness associated with having children. This is an important contribution to the literature, especially because individuals will generally vary greatly in the way they assign subjective value to childbearing and having children. This depends on their preferences for children (Kravdal 2013), a feature which is not captured in the general measure of happiness or life satisfaction.

The main purpose of this paper is to further explore the relationship between happiness and childbearing. We make use of a rather unique feature of the Generations and Gender Survey (GGS), in which respondents are asked directly in the first round about the way they think having children will affect their wellbeing. Thanks to the recent availability of data from the second round of GGS undertaken three years later, we are able to assess to what extent expected happiness about childbearing predicts actual childbearing events. Our analysis is divided in two. First we consider the determinants of the way respondents assess happiness associated with childbearing, and in the second part we estimate the impact of this assessment on actual childbearing events. Using data from three countries (France, Italy and Bulgaria), we are also able to study how the estimates differ across societies, which in any case differ substantially in fertility levels and other characteristics that may affect well being and childbearing.

2. Background

The *value of children* approach, first introduced by Hoffman and Hoffman (1973) and re-proposed by Friedman et al. (1994), considers fertility as the outcome of purposeful decision-making. Individuals choose to have children on the basis of their perception of the current situation and their expectations about the future. They will decide to have a child if they believe that the benefits provided outweigh its expected costs. From the researchers' point of view, the idea is that taking into account the positive and negative consequences of childbearing helps us to understand fertility-related decision-making. Consequently the approach has improved out comprehension of fertility trends and the process of declining fertility (Buhler, 2006). Related to this perspective, Billari (2009) and Billari and Kohler (2009) argue that the *commonality* in demographic decision making is the natural desire of individuals to increase their wellbeing. Individuals would decide to have a child if they expect to have a positive impact on their lives. Recently, a number of studies have focused on the link between subjective wellbeing and childbearing as an explanatory key to understand fertility choices. Many of these are based on cross-sectional data sources. For example, Aassve et al (2012) use the European Social Survey focussing on European countries, whereas Margolis and Myrskyla (2011) undertakes a similar analysis based on the World Value Survey (WVS), thereby giving a more global perspective on happiness associated with childbearing. This is an interesting approach, because it informs us about how country characteristics may matter for the way individuals associate subjective wellbeing with having children, and is therefore informative in explaining fertility trends. For instance, Aassve et al (2011), compare levels of reported happiness within countries with different fertility levels and focus on how institutional settings and welfare provision affect happiness associated with childbearing.

Another line of analysis considers subjective wellbeing and childbearing using longitudinal data. In contrast to the cross-sectional comparative perspective, individuals are followed over time, and their reported happiness is held up against childbearing events. The use of longitudinal data is important when trying to estimate a causal relationship between subjective wellbeing and life events. Indeed, if evidence show that happiness and, for instance, marriage are strongly correlated with several measures of subjective wellbeing, it is also likely that these events are related to the level of happiness prior to the event. In other words, relatively happy individuals may have a higher probability of getting married than unhappy ones (Clark et al. 2008). Clark et al. (2008) use the German Socio-economic panel to follow individuals before and after a number of economic and demographic events, including childbearing. Their findings show that, while the recent arrival of a child has a positive effect on women´s life satisfaction, it has little impact on men´s happiness, and

in the long run the impact is negative for both parents. Myrskyla and Margolis (2012), using both the British and German panel data sets with fixed effect estimation, demonstrate the way happiness changes both before and after childbearing events, and also how it differs by parity and other individual characteristics. Their results show that in general, happiness increases in the years around the birth of the first child, for then to decrease to pre-birth levels. However, there is important variation in both the short- and long-term effects on parental wellbeing by parity and socio-demographic characteristics. Although the first two children increase happiness, the third does not. They also find that those who have children at older ages and those with higher socioeconomic resources have more positive and long lasting impact on reported happiness. Taking a different approach, Kohler et al. (2005) use a sample of monozygotic twins to estimate the contributions of marriage and children to subjective wellbeing-or happiness. Using this specific data, they are able to control for many unobserved factors affecting both happiness and demographic behaviour, and therefore getting closer to the causal effect of children and marriage for subjective wellbeing. Their findings show that the general effect of children on subjective wellbeing is remarkably small, being insignificant for women, while significant, but with very low impact for men. However, when the impact of children is decomposed by parity, they find that the arrival of the first child has large positive effect on both women and men, while higher order childbearing events have no significant effect, and if at all, it appears to be negative. Similar results are found by Baranowska and Matysiak (2011) who use longitudinal data to study the impact of childbearing on individual-happiness in Poland. Their findings show that parenthood is an important determinant of subjective wellbeing for women, but not for men, and that the impact of children on individuals´ happiness depends on parity. The arrival of a first child increases the well-being of new mothers, while the effect of second or higher order births is ambiguous. Women with two children declare to be happier than childless ones, but the birth of a second child does not increase wellbeing with respect to the first. For men, the effect of childbearing on subjective wellbeing is generally very weak.

Assessing the causal impact of children on individuals' happiness give rise to several problems. As Kravdal (2013) argues, one outstanding issue is the significantly different perceptions individuals may have about the effects of having a child, which is likely to affect both the choice to have a child and the subsequent increase or decrease in happiness coming from it. "Many of those who have few or no children have chosen this because they think their life will be best this way, and their happiness therefore tells us little about how happy their more fertile counterparts - who to a large extent have other preferences – would have been if *they* had few or no children" (Kravdal, 2013). A related issue is that questions about happiness are general, and many factors other than children will matter for individuals' overall assessment of their wellbeing. Thus any reported effect

of childbearing tend to be rather small, and as such an overall happiness effect of children seems not to be very informative nor necessarily reliable. These aspects add to the fact that results on the effect of childbearing on subjective wellbeing tend to be quite mixed (Billari and Kohler, 2009), showing no strong and unison direction.

All of this would suggest that a more fruitful approach would be to ask individuals directly about how their subjective wellbeing is affected from having children, or, how their wellbeing will be affected if they go on to have children. This is a promising avenue, because instead of considering the general measure of happiness, individuals will in this case report specifically the subjective wellbeing they derive from childbearing. With a positive assessment, one would naturally argue that the likelihood of childbearing is higher. This approach bears resemblance to the theory of planned behaviour (TPB), in which the focus lies on individuals' intentions to have children. These can be predicted with high accuracy by attitudes towards that behaviour, together with subjective norms and perceived behavioural control (Ajzen, 1991). Intentions express the motivational factors that influence a behaviour, i.e. how hard an individual is willing to behave in a certain way. Intuitively, the higher the intentions to engage in a behaviour, the higher the probability that this is performed. However, the realization of intentions will depend on whether individuals can decide at will to perform that behaviour (behavioural control) and, more specifically, on their perception of it. In this framework, a subjective assessment of external conditions and of the consequences of a behaviour in a specific context are relevant components for explaining individual behaviour.

3. Data

We use longitudinal data from Generations and Gender Surveys (GGS) – comparative cross-country and individual-level surveys – for Bulgaria, France and Italy[1], for which we have available information about individuals' expected happiness from having a child (in the first wave) and information about fertility events in the three following years that is derived from the second wave[2]. We include only individuals living in a couple, aged from 18 to 40 at the first wave and who answered the questions of interest.[3] As result, the analysis is performed on a sub sample composed by 5,778 individuals, of whom 2,501 are Bulgarian, 1,259 are French and 2,018 are Italians.

[1] For Italy the GGS survey is the harmonised version of a national panel survey called Family and Social Subjects (FSS) conducted by ISTAT (the Italian National Statistical Office) in 2003 and 2007, in the wider framework of the so-called Multi-Purpose surveys.

[2] Germany, for which data from the second wave were also available, was excluded from the analysis because of the bad quality of the data. We also decided to exclude Georgia because of the very different social and economical setting compared to the other considered countries.

[3] Observations missing information about expected happiness from childbearing for individuals in the age intervals are 3245.

The Fertility section in wave 1 of GGS contains a series of questions concerning the predicted effects of having a/another child in the following three years. Among them, it is asked the effect this event would have on "the joy and satisfaction you get from life". The possible answers are "much better", "better", "neither better or worse", "worse", "much worse". We recode the variable so that our measure ranges from value 2 ("much better") to value -2 ("much worse"), and the value zero predicts a neutral effect. It should be clear that this measure differs from the more standard way of considering subjective wellbeing and fertility, since individuals are here asked to what extent *childbearing* will bring about a deviation away from what would otherwise be their preset level of wellbeing. The measure overcomes the common criticism concerning the reliability of subjective wellbeing (e.g. the different interpretation of words such as *better*, *worse*, *much better*; Oswald and Clark, 2002). The subjectivity of the measure is desirable in the sense that our interest lies in individuals' expectation of its effect more then the real effect of children. From an econometric point of view, an important feature of such a variable is that it is not a cardinal measure, which we deal with in our econometric analysis.

4. Descriptive findings

Table 1 shows descriptive statistics of the sample. Average age of the interviewees in all countries lies between 30 and 36 years. The Italian sample is the oldest ones, with an average age of around 35 years. As indicator of the parenting situation of the individuals, we consider both the total number of children and the proportion of individuals being childless, with one child or two and more children. The number of children an individual has is of particular interest in our analysis, since it is likely to influence strongly the expectations about a (new) birth. The French sample shows a surprising low average number of children (0,7 on average compared to Italian and Bulgarian values, both around 1.4), as we know that France has the highest fertility level among the considered countries. On the opposite, the Bulgarian and Italian samples show a high proportion of individuals with two or more children. A strong gender difference emerges in activity status, showing a much higher proportion of employed men than women. In general, in the Bulgarian sample the ratio of employed individuals is lower than in the other countries. An opposite gender pattern emerges in education, where women show a higher proportion of tertiary education level than men do (except for the Italian sample).

The last rows of the table show the average values and the distribution of the two main variables of interest, i.e. the level of expected happiness from childbearing and the proportion of individuals who had a child in the three years between the two waves. Italy shows the highest expected happiness, with a level around 0.9. France follows, with a level around 0.7 for women and

0.8 for men, while Bulgaria shows a much lower value (around 0.2). In the French sample, the high level of expected happiness from childbearing corresponds to a relatively high ratio of individuals who had a child in the following three years. The same is not true for Italy, where the ratio of *new child* is similar to the Bulgarian one. It seems that, in Italy, many people predict a high increase in happiness from having a child, but only a relatively small part goes on having a(nother) child.

4.1 Distribution of expected happiness from childbearing

To provide an idea of who expects to be happy from having children (and who does not), Figure 1.1 shows the average levels of expected happiness, by gender and country. As we already noticed in the previous section, the average level of expected happiness is positive and lies between 0 and 1, for both genders and in all countries. The country where individuals have the highest expectations about the effects of childbearing is Italy, followed closely by France, while in Bulgaria the average answer is rather neutral. A striking feature is the gender difference: in all countries men show a higher level of expected happiness. The difference is not huge, but appears consistent across countries. Differences among countries become significant when we consider the patterns of expected happiness by parity. Figure 1.2 shows the average levels of expected happiness by the number of children individuals already have at wave 1. The patterns suggest that a big proportion of the observed country differences are driven by variation in the expectations about higher parity births. All countries show similar levels of expected happiness when considering first or second births, while significant differences emerge from the third onwards. While in France and Italy expected happiness remains positive, for Bulgaria it becomes negative or very close to zero.

Table 1: Individual characteristics by country

	Bulgaria		France		Italy	
variable	***Female***	***Male***	***Female***	***Male***	***Female***	***Male***
Age	31.7	32.7	31.9	34.2	34.6	35.9
Average number of children	1.5	1.4	0.7	0.7	1.5	1.4
Childless (%)	8.2	15.4	47.3	46.3	14.1	17.1
One child (%)	39.1	36.6	36.6	40.0	31.7	34.7
Two kids (%)	52.6	47.9	16.0	13.5	54.1	48.1
Job status (%)						
Employed	59.2	69.9	70.1	81.9	59.7	95.9
Unemployed	22.9	26.8	8.2	8.7	4.3	2.8
Student	0.5	0.0	3.7	4.3	0.7	0.01
Education (%)						
Tertiary	25.8	12.4	46.5	34.9	42.6	49.5
Secondary	41.9	59.4	41.9	53.1	44.1	38.8
Primary	22.2	27.4	11.5	11.9	11.1	09.7
Average of expected happiness from childbearing	0.20	0.36	0.69	0.81	0.91	0.99
Much better (%)	6.2	6.7	21.9	22.5	21.7	22.8
Better (%)	30.8	33.3	38.2	39.5	49.5	51.0
Worse (%)	14.1	13.2	6.8	5.2	2.5	2.2
Much worse (%)	4.7	3.9	3.3	2.9	0.2	0.1
New birth between first and second waves (%)	18.1	22.8	29.2	34.2	21.9	26.6

Figure 1.1: Average values of expected happiness from childbearing by gender and country

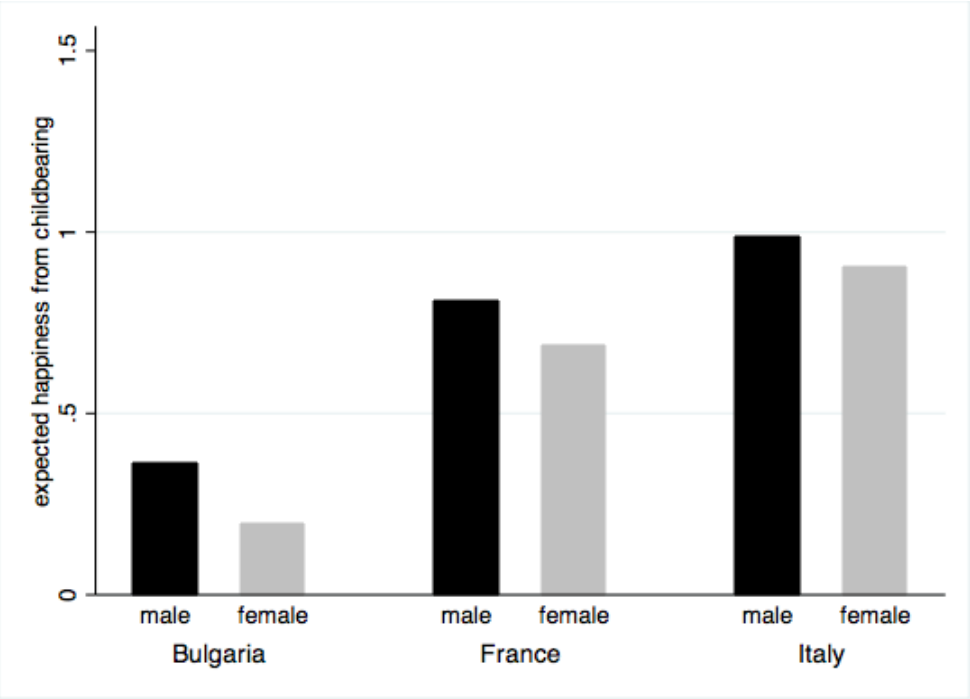
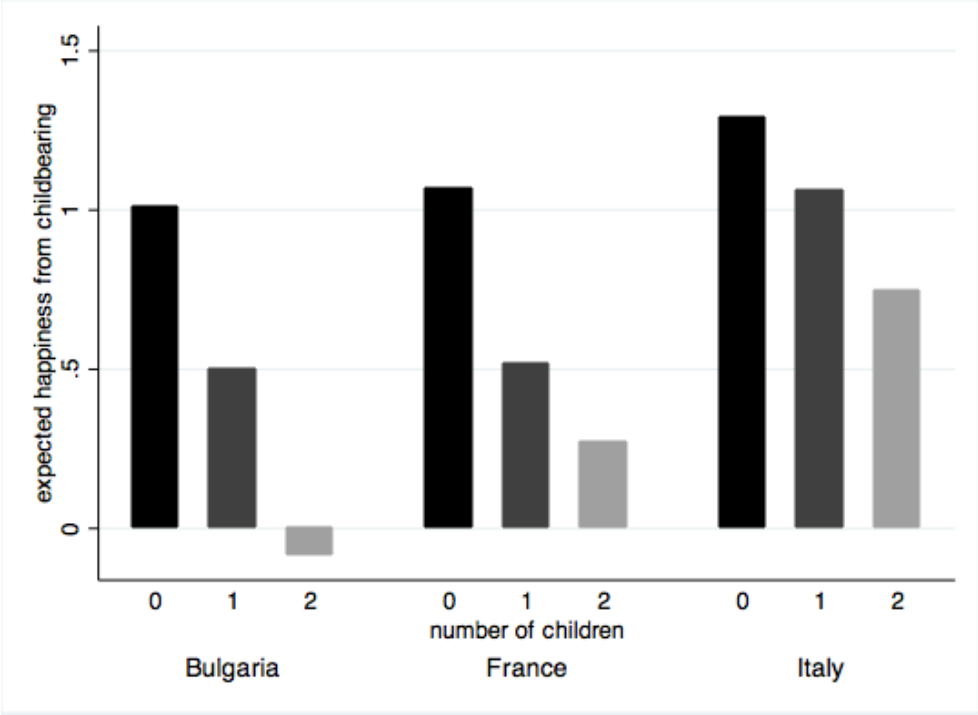


Figure 1.2: Average values of expected happiness from childbearing by parity and country



5. Determinants of expected happiness

We start by assessing the determinants of the self reported measure of future change in personal satisfaction linked to childbearing. For this purpose, we run a regression model with the level of predicted happiness from childbearing as the dependent variable and a set of individual control variables. Since the dependent variable is ordinal we estimate an ordered probit model. The regressions are run separately for women and men, since the descriptive analysis suggest that men and women differs in their predicted happiness from childbearing. As before, we consider the different country samples separately. The regression model can be expressed as follows:

$$(1)\ \textit{Exp. Happiness} = \alpha + \beta X_{ij} + \varepsilon_{ij}$$

where the vector X_{ij} includes individual controls and ε_{ij} is an individual error term. The explanatory variables include gender, age, number of children, job situation and educational level. The different job statuses are represented by three dummy variables: *employed* for individuals who are either employed or self-employed, *unemployed* for those individuals who declare not to be working (either unemployed or inactive individuals) and *student.* Highest educational level obtained are coded according to the international ISCED classification, and we use three different dummies, namely *low, middle* and *high education*, indicating that the individual has reached respectively primary or low secondary education, high secondary or post-secondary non-tertiary education, and low or high tertiary education. To better understand the effect of the number of children the individual has, a particularly important variable in our analysis, we use three different dummies accounting for whether the individual is childless (*childless*), has a child (*one child*) or two or more children ("*two kids*"). All individual controls refer to the time of first wave. Unfortunately, we are not able to include any measure of income in our analysis since this is lacking in the Italian sample.

Table 2 shows the results of the regression model (1), performed on the sample divided by country and by gender. Results seem to confirm the general trends observed in the descriptive analysis, but also add further insights. The number of children the individual has at the time of wave 1 negatively affects the expectations about a new birth. Both coefficients of *one child* and *two kids* are negative and significant, except for in the female Italian sample, where only the second one shows a significant coefficient.

Being employed has a negative impact only for French women, and a positive one for Bulgarian men. Interestingly, being a student is positively correlated with expected happiness from childbearing in the female Bulgarian sample, while in the French female one, there is a negative

association. It has no significant effect on men at all. A high educational level leads women to higher expectations about childbearing, except for France, while it seems not to be important for men (the reference category is having completed a secondary educational level). A low educational level is negatively correlated to expected happiness only for the Italian sample, for both genders. Such features seem in contrast with theories as the *second demographic transition* one, which relates women's high education with low fertility level, but might go in the same direction as the findings of a direct relationship between development and fertility in highly developed societies (Myrskyla et al., 2009)

6. Expected happiness and realized fertility

We now turn to the effect of predicted happiness on actual childbearing - the latter measured by whether the respondent had a(nother) child between the two waves (we build the dichotomy variable *new child* taking value 1 if the individual had a child and 0 otherwise). Table 3 shows the proportion of individuals predicting the different levels of change in happiness and, among each group, the proportion of individuals who have a child in the following three years. It is immediately clear that people who predict an increase in happiness from childbearing have the highest proportion of realized fertility**.** The ratio of individuals having a child among those who predict either a decrease in wellbeing or no great effect is much lower. Interesting, there is almost no difference in the ratio of realized fertility for these three categories (individuals who answered "much worse", "worse" or "neither worse or better"). The prediction of an increase in wellbeing coming from childbearing seems then to be connected to a higher probability of having a child, while the prediction of a decrease does not make any significant difference compared to the expectation of a "neutral" effect. In general, the proportion of realized fertility is in quite low, since only the 35% of individuals who declared they would be much happier with a child did actually have one in the three following years (and 20% of the whole sample).

However, Table 3 does not tell anything about the causal relationship between expected happiness and consequent fertility behaviour, indeed, it might be that other individual characteristics lead both to a higher level of predicted happiness and to a higher probability of having a child. To assess the direct link between expected happiness and fertility, we perform a regression analysis with controls for individual characteristics and countries. We estimate a series of regression models where *new child* is the dependent variable and expected happiness from childbearing, divided in dummy variables, is the main explanatory variable. We use a logistic

model, since the dependent variable is binary-response. We include the set of individual controls and country dummies. The general equation of the model is the following:

$$(2)\quad \text{Prob}\,(newchild)_{ij} = \alpha + \beta X_{ij} + \gamma\, exp.\, happiness_{ij} + \delta_j + \varepsilon_{ij}$$

Where X_{ij} is a vector including individual controls and ε_{ij} is again the individual error term. We run different specifications of the model, on the whole sample divided by gender and by country.

Table 2: Ordered probit regression of expected happiness from childbearing on individual characteristics. Fe divided by country

	Bulgaria		**France**		**Italy**	
	Female	***Male***	***Female***	***Male***	***Female***	***Male***
Age	-0.0482 (-0.86)	-0.0733 (-0.92)	0.288*** (-3.31)	-0.0224 (-0.17)	0.148 (-1.4)	-0.0119 (-0.06)
Age square	0.000313 (-0.35)	0.000834 (-0.66)	0.00519*** (-3.76)	-0.00017 (-0.08)	-0.00285 (-1.79)	-0.000265 (-0.09)
One child	-0.702*** (-6.52)	-0.589*** (-4.99)	-0.535*** (-5.45)	-0.644*** (-5.35)	-0.12 (-1.18)	-0.475*** (-3.76)
Two kids	-1.283*** (-11.54)	-1.403*** (-11.32)	-0.823*** (-6.28)	-0.766*** (-4.58)	-0.492*** (-4.79)	-0.901*** (-7.06)
Employed	0.0248 (-0.4)	0.294*** (-3.46)	-0.197* (-2.08)	-0.0609 (-0.33)	0.0831 (-1.23)	0.0428 (-0.2)
Student	1.179** (-2.59)	0 (.)	-0.734** (-3.14)	0.15 (-0.28)	0.27 (-0.69)	5.048 (-0.03)
High education	0.273*** (-4.19)	0.2 (-1.77)	0.033 (-0.36)	0.215 (-1.74)	0.324*** (-3.29)	-0.137 (-0.99)
Low education	-0.0974 (-0.83)	-0.0875 (-0.55)	-6.536 (-0.03)	0.852 (-0.79)	-0.194** (-2.78)	-0.293*** (-3.35)
N	1593	908	756	503	1257	735

t statistics in parentheses

* p<0.05, **p<0.01, ***p<0.001

Table 3: Expected happiness from childbearing and fertility realization

Expected happiness from childbearing (percentage of individuals)	**Proportion of birth of a new child between wave 1 and wave 2**
Much better (15.8%)	35.0 %
Better (40.5%)	23.7 %
Neither worse or better (38.3 %)	12.0 %
Worse (7.6 %)	11.9 %
Much worse (2.4%)	12 .1%
Total	20.4 %

6.1 Results

Results of model (2) are shown in Tables 4 and 5, respectively on the female and male sample. We want now to explore in details how our measure of expected happiness from childbearing impacts fertility behaviour and how it changes depending on gender and the country where individuals live. Reference category for what concerns expected happiness is the answer " neither worse or better", then the coefficients of *better*, *much better* and *worse* show how expecting an increase (or decrease) in wellbeing affect the odds of having a child with respect to expecting no variation. Notice that the variable *worse* includes both original answers "worse" and "much worse". Including individual controls in the regression model accounts for the possible factors affecting both the level of expected happiness from childbearing and the choice to have a child, allowing us to estimate the net effect of expected happiness.

The main result of the regression model is that the variables on expected happiness seem to be good predictors of the fertility behaviour, however strong differences exist among countries.

Table 4. Logistic regression the presence of a/(another) child on expected happiness from childbearing and individual controls by country, female sample

	Bulgaria	France	Italy
Female			
Age	0.346* (-2)	1.160*** (-4.85)	1.066** (-2.98)
Age square	-0.00924** (-3.07)	-0.0219*** (-5.42)	-0.0194*** (-3.54)
Number of children	0.0539 (-0.52)	-0.332* (-2.05)	-0.830*** (-7.68)
Employed	-1.117*** (-6.45)	-0.805*** (-3.53)	-0.0996 (-0.55)
Student	-0.708 (-0.79)	-1.710** (-3.11)	-0.594 (-0.77)
High education	0.556** (-2.88)	0.407 (-1.95)	0.647** (-2.85)
Low education	-0.162 (-0.58)	0.295 (-0.84)	-0.456* (-2.33)
Much better	0.24 (-0.79)	0.731** (-2.73)	0.567* (-2.29)
Better	0.308 (-1.69)	0.367 (-1.49)	0.522* (-2.36)
Worse	-0.011 (-0.05)	-1.275* (-2.25)	-0.152 (-0.20)
N	1593	756	1257

t statistics in parentheses

* p<0.05, **p<0.01, ***p<0.001

Table 5. Logistic regression of the presence of a/(another) child on expected happiness from childbearing and individual controls by country, male sample

	Bulgaria	**France**	**Italy**
Female			
Age	0.225 (-1.17)	1.316*** (-4.1)	0.259 (-0.53)
Age square	-0.00664* (-2.09)	-0.0213*** (-4.23)	-0.00662 (-0.92)
Number of children	0.107 (-0.96)	-0.340* (-1.98)	-0.707*** (-5.70)
Employed	-0.0361 (-0.18)	-0.368 (-0.96)	0.367 (-0.62)
Student	0 (.)	0.38 (-0.37)	0 (.)
High education	0.374 (-1.4)	0.304 (-1.35)	0.223 (-0.75)
Low education	0.0766 (-0.23)	-0.309 (-0.79)	-0.434* (-2.11)
Much better	0.526 (-1.59)	1.428*** (-4.41)	0.682* (-2.17)
Better	0.122 (-0.58)	1.013*** (-3.4)	0.674* (-2.37)
Worse	0.072 (-0.25)	0.384 (-0.68)	0.548 (-0.65)
N	908	503	735

t statistics in parentheses

* p<0.05, **p<0.01, ***p<0.001

In the French and Italian sample, coefficients of *much better* and *better* are positive and significant (except for French women, for whom *better* is not significant), showing that the expectation of an increase in happiness coming from childbearing leads to a higher probability of having a child in a three-years-period of time. French men, in particular, show very high coefficients. On the opposite, the variables of interest have no significant effect at all in the Bulgarian sample, suggesting that, in this country, the expected happiness from childbearing has no significant impact on fertility behaviour.

Surprising, the coefficients of *worse* do not suggest an analogous (opposite) effect of a predicted decrease in happiness coming from childbearing. This result goes in contrast to the one reported by literature, which finds a strong reliability of fertility negative intentions as predictors of the (non) realization of them (Régnier-Loilier and Vignoli, 2011), but it was already noticed in the graph above. It might suggest that the expectation of a decrease in happiness from childbearing do not translate into negative fertility intentions. An exception are French women, for whom the coefficient of *worse* is also significant.

Considering individual controls, both some similarities and differences can be found across the three considered countries. In the female sample, being employed has a significant (and negative) impact on the probability to have a child only in Bulgaria and France, while being a student in France only. In the male sample neither of them does, for any country. Having a high educational level has positive impact in the female sample in all countries but France, while a low educational level has negative impact only in Italy. In the male sample, high education does not show any significant impact, while having a low education impacts negatively the probability to have a child in Italy.

7. Conclusion

Using the recently-released second wave of GGS, we focussed on the expected effect of childbearing on life satisfaction as a key explanatory variable of fertility choices in three European countries (Bulgaria, France and Italy). In the first part of our work, we provided an overview of how the expected wellbeing associated with childbearing is distributed among individuals, showing that there are differences across gender, country of residence and other individual characteristics. Men declare, on average, a higher level of expected happiness than women, a feature that remains robust in all three countries. The level of expected happiness decreases with the number of children already present, which relates both to practical difficulties in caring about more than one child at the same time. In this sense, the measure of expected happiness from childbearing assumes a different

meaning when considering childless couples as opposed to those already being parents. These results are not unexpected, since the event of becoming a parent is a different experience than having additional children. Moreover, before having the first child, prospective parents might have unrealistically high expectations about the joy derived from being a parent. When assessing the joy derived from having further children, expectations are in part a result of their experience from already being a parent. Interestingly, differences among countries emerge only when considering individuals that already have one child. An interpretation is that, since their expected wellbeing from having children is based on own experience, they are likely to be more influenced by the environment and context. As for the French sample, our findings are consistent with what expected. Where parents fare better due to generous state support, individuals declare higher levels of expected happiness from childbearing. As shown by Aassve et al. (2011), in countries where fertility is high, mothers are happier than non-mothers, while the opposite is true in countries with low fertility levels, and our results here give some support to this idea.

The high level of expected happiness observable in the Italian sample is surprising. Whereas Italians have the most positive expectations from having children (for all parities) we also see that the rate of realization is low. In addition, we know that actual fertility levels in Italy are low, especially for higher parities. It is interesting to compare this to Bulgaria, where also the fertility level is low. But here the predicted level of happiness from childbearing is much lower. It appears that low fertility level in Bulgaria is driven (in part) by individuals' non-positive outlook for the future - thereby reporting difficulties associated with childbearing. In Italy, individuals are generally very positive towards childbearing, but they appear not to realize it, suggesting that the mechanism is different from what we see in Bulgaria. One possible explanation might also be found in the Italian culture and social structure. For example, the great importance of the family and a strong Catholic culture might lead to a general, positive feeling of the importance to have children. In addition, the prediction of a decrease in happiness coming from childbearing might be considered as socially inacceptable.

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