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Abstract

Using several rounds of the Eurobarometer [EB] survey, we examine the relationship between lifetime fertility intentions and the "Great Recession" in Europe. We suppose that the increase in unemployment rates observed between 2006 and 2011, the years in which the two EB surveys were conducted, are key driving forces behind the decline of fertility intentions observed in some EU countries, like Greece, over the 5-year period. Our findings reveal that the increasing uncertainty attached to the reported fertility intentions substantially contributes to the declining pattern observed over the five years and that people who negatively assess the country economic situation are more likely to plan smaller family sizes than those who have a more optimistic view of the country past short-term economic trend. Eventually, the aggregate negative changes occurred in fertility intentions between 2006 and 2011 are positively correlated with the increase of youth unemployment rates. We might expect a similar declining trend in lifetime fertility intentions also in other countries – such as Spain, Italy, Ireland and Portugal – in the years to come if the economic crisis starts to be perceived as heavily as in Greece in such countries.

Keywords

Lifetime fertility intentions, Great Recession, multilevel analysis, Europe, unemployment rates, PIIGS

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1. Introduction

When asked to estimate their final complete family size, individuals tend to under-estimate the number of children they will have in their whole reproductive career; nevertheless, their reported lifetime fertility intentions are a strong predictor of their actual fertility (Schoen et al. 1999; Quesnel-Vallée and Morgan 2003; Bongaarts 2001). One of the most important values of reproductive intentions lies in the fact that they are informative about directional trends: actual and intended fertility show similar trends despite the fact that are not at even levels (Goldstein, Lutz and Testa 2003; Hin et al. 2011, p.132).

In this context, therefore, it is surprising that while the economic recession has been studied in relation to actual fertility (see, among others, Sobotka et al.2011), no analyses of the relationship between economic recession and fertility ideals and intentions have yet been carried out. If the recent economic crisis has played a role in re-shaping attitudes towards childbearing either through views of individual life courses to come or through a general attitudinal shift in the place of family within society, this could play a role in affecting the anticipated recovery in TFR after the end of the recession in some countries. This could suggest the possibility of an impact upon cohort/quantum fertility.

We aim to extend upon previous literature by focusing on the link between fertility intentions and the 'Great Recession'. More specifically, we try to answer the following questions: Has the recent economic recession affected fertility intentions? Are the changes concentrated either spatially or in some age and socio-economic groups? What future trajectories might we anticipate?

It is important – if difficult – to differentiate ongoing trends in TFR from those occurring as a result of the recession. We therefore analyse three waves of the Eurobarometer [EB] survey – 2001, 2006 and 2011 – in order to identify any distinct shifts occurring between 2006 and 2011 as compared to between 2001 and 2006. This latter period includes the onset of the Great Recession in 2008. However, our findings will be necessary limited by only having three data points and, crucially, by the fact that the recession is shifting in form and intensity in different European settings over time (see Section 2.2). Indeed, the recession is arguably at its most intense in countries such as Greece and Spain in 2012, i.e. after the last wave of the survey (Bentolila et al., 2012). In Spain, for example, the national public debt is expected to rise from 85% in 2012 to 90.5% in 2013 (Washington Post, 2012). As such, these findings should be regarded as preliminary and indicative.

2. Background

2.1 Theoretical Relationship between Economic Conditions and Fertility

There is a wide and extensive literature concerning the relationship between fertility and economic conditions in general and recession in particular. Here, therefore, we outline the state-of-the-art of current thought on the topic.

The economic argument concerning fertility and recession is, fundamentally, whether or not the relationship is pro- or counter-cyclical. The argument for a counter-cyclical relationship is based upon the assumption that temporary periods of unemployment constitute a good time for childbearing as the opportunity costs are lower. This, in turn, stems from Becker's microeconomic model of fertility (Becker, 1960, Becker, 1991). Here, childbearing is recognised as profoundly time consuming, and the associated opportunity costs are closely linked to the potential wages of the parents. Rising male wages produce an income effect that raises *demand* for children. For women, rising female wages results in a combined income and substitution effect. The income effect raises the demand for children, while the substitution effect results in an increased cost of children relative to other goods. In this context, women (especially those with high potential wages) may restrict fertility and 'trade-off' children for less time-demanding alternatives. On the other hand, when the substitution effect is diminished for women – perhaps through higher rates of unemployment, fertility should – theoretically – increase.

The most widely quoted empirical evidence for a counter-cyclical relationship between fertility and recession is the increased birth rates of the United States in the 1960s and 1970s. Butz and Ward (1979a; 1979b), in particular, found evidence of this for the early 1970s. However, later research has suggested that fertility in this period did, in fact, remain largely pro-cyclical (Macunovich, 1995).

Indeed, a pro-cyclical relationship between recession and fertility is one which appears to prevail in the literature. Empirically, this has been found to be the case in both long time series (Sobotka et al., 2011, Rindfuss et al., 1988) and individual country data (Adsera, 2011, De Beer, 1991, Hoem, 2000, Kravdal, 2002, Macunovich, 1996, Namkee and Mira, 2001, Rindfuss et al., 1988). Sobotka et al. (2011) examined 701 country-year cases in order to ascertain the association between GDP change and changes in the period Total Fertility Rate [pTFR]. The odds ratio of TFR decline during periods of economic recession was found to be Theoretically, as Easterlin observed, fertility varies with the relative affluence of the younger compared to 1.1 in times of growth (GDP growth of 1.0% or higher) and 1.2 in periods of stagnation. cohorts which, he argues, is gauged on a micro-level against their childhood experience within the household (Easterlin, 1973, Easterlin, 1976a).

Despite this, Sobotka et al. (2011) point out that in terms of household responses to economic conditions, fluctuations in GDP are not necessarily the best variables to employ. Various studies for both the USA (Becker, 1960) and the Netherlands (De Beer, 1991, de Jong, 1997, Fokkema et al., 2008, Van Giersbergen and De Beer, 1997), for example, have examined the relationship between consumer confidence and fertility, with each broadly finding that declines in birth rates were

positively associated with trends in both purchases and indices of consumer confidence (with appropriate lags).

Unemployment, meanwhile, is identified as a far more tangible measurement of the impact of recession upon men and women of reproductive age. Indeed, the on-going low fertility rates found in Southern Europe have been partly attributed to persistently high levels of unemployment and job instability (Adsera, 2004, Adsera, 2005, Billari and Kohler, 2004). A negative relationship between unemployment and fertility has been found in a wide array of studies across Europe, North America and East Asia (see (Sobotka et al., 2011) for a complete review), with many of these studies disaggregating by gender effects (Örsal and Goldstein, 2010) and by individual and aggregate trends in unemployment (Kravdal, 2002).

It is important, however, to move beyond considering simple linear relationships, and to recognise the fact that the association between unemployment/fragile labour conditions and fertility is complex and heterogeneous across age, parity, institutional framework and length of economic shock. In Finland, for example, the economic shock of the early 1990s was met with a continuing upward trend in births at parity two and above while first-order births were postponed (Vikat, 2002, Vikat, 2004) – a feature which suggests the possible role of strong welfare states in mitigating the impact of economic shocks upon fertility. A similar mixed relationship has recently been reported in Japan by Hashimoto and Kondo (Hashimoto and Kondo, 2011), who found that in the period of recession fertility among college-educated women who entered the labour market at the onset of recession *rose*, while fertility among secondary educated women and among women who entered the labour market at the height of recession declined – or, likely, was postponed.

All of this concurs with Sobotka et al's suggestion that 'we should interpret the aggregate effects of recession as outcomes of frequently countervailing forces where some individuals find it advantageous to have a child during economically uncertain times, whereas other will decide to postpone the next birth or refrain from childbearing altogether' (2001, p.271). Indeed, it is exceptionally difficult to disentangle the role of explicitly economic factors from other factors. While recognising this heterogeneity in experience, this point also leads us to the final important puzzle of whether recession has an overall impact upon tempo and/or quantum of fertility. The consensus view appears to be that recession generally impacts upon *timing*, especially of first-births. However, one recent study has identified a possible link between recession and a decline in quantum of fertility (Örsal and Goldstein, 2010) – although, again, the fact that economic recessions in the twentieth century have tended to 'sit' in the midst of fertility decline *anyway* which means an increased difficulty of disentangling the effect.

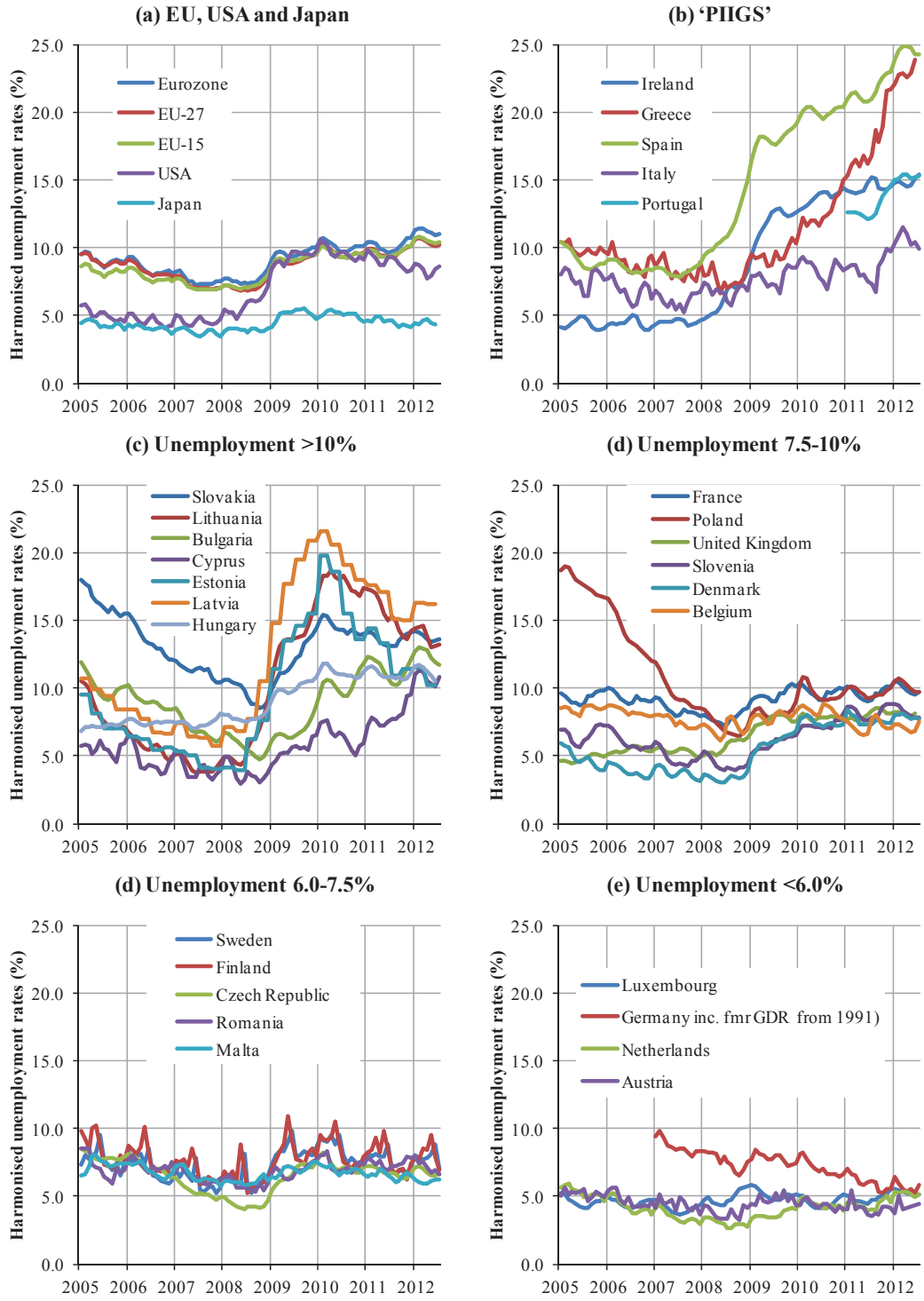
2.2 'The Great Recession' in Europe

The 'Great Recession' in Europe has taken a variety of shifting forms in both intensity and regional impact since its onset in 2008. From its roots in the sub-prime mortgage market through the collapse of international and national banks to the current

Eurozone/sovereign debt crisis, the Great Recession has gone through a number of manifestations. If we consider unemployment one of the most important related variables concerning fertility change, we can see significant fluctuations across both time and space. Indeed, there is clear evidence of two distinct 'peaks' of worsening unemployment in late 2008 and from mid-2011. This is especially important in terms of interpreting the results of our survey (Eurostat, 2011).

Unemployment has struck parts of Europe with different rates of intensity. In Figure 1, we separate out the recent unemployment patterns of the EU, Japan and the USA (1a); the larger economies most affected by the sovereign debt crisis, namely Portugal, Ireland, Italy, Greece and Spain – the so-called 'PIIGS' (1b); and other countries with unemployment rates in July 2012 of more than 10.0% (1c), 7.5-10.0% (1d), 6.0-7.5% (1e) and less than 6.0% (1f). Clearly, highly divergent patterns emerge. Of the 'PIIGS', Greece, Spain and Ireland have seen pronounced, constant increases in unemployment, with a sharp rise in Italy since 2011. The Baltic States (Latvia, Lithuania and Estonia) saw a sharp turnaround in 2008 as a result of a sharp about-turn in economic growth – but each of these appears to have brought unemployment back under control. Other new accession countries such as Bulgaria, Hungary, Cyprus and Slovenia have seen steady increases in unemployment up to around 10%, while the economic 'miracles' in Poland and Slovakia have been halted. However, other large, western and northern economies have posted relatively modest increases in unemployment. Germany, indeed, returned a constant *decline* over the period of the crisis – although the underlying confidence of the German population regarding its obligations in the sovereign debt crisis should not be underestimated.

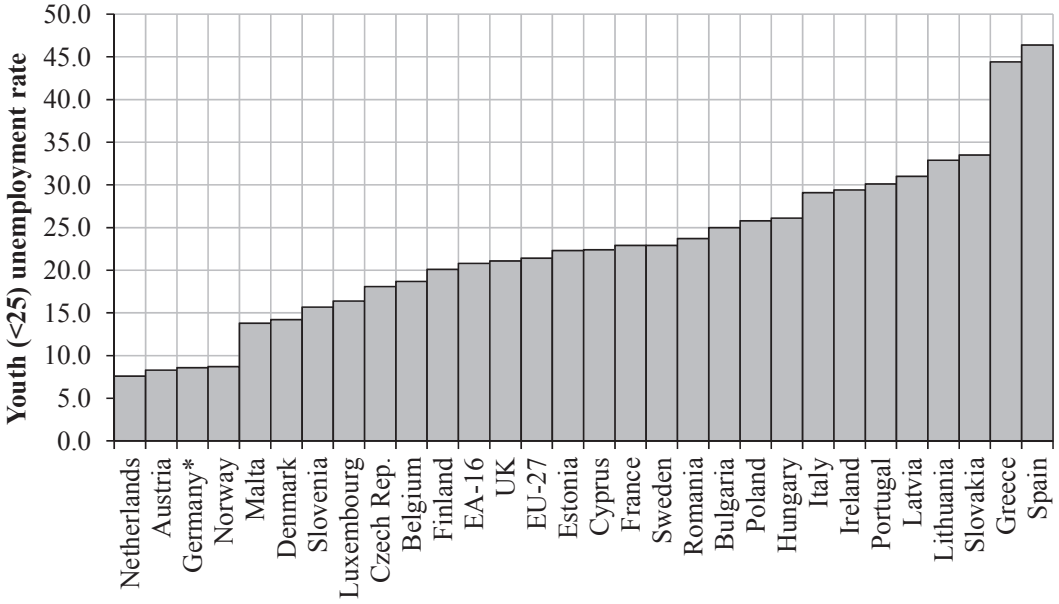
Figure 1. Harmonised unemployment rates (%), EU member states and other territorial units



Source: Eurostat

Turning to youth unemployment, the picture appears even more stark. Figure 2 shows data for unemployment among young people (aged below 25) from 2011. Here, Greece and Spain hover around 45% with a further six countries around 30%. This, of course, is difficult to judge in relation to impacts on fertility. If the Recession ends relatively soon, and economic prosperity returns to Europe – and Southern Europe in particular – then the young will have more time to recoup lost time regarding the postponement effect observed in other economic shocks. However, if the Recession is prolonged and a generation of young people are left in a fragile labour market, then Easterlin's observation regarding the importance of the relative prosperity of the youth cohorts could mean a general decline in quantum fertility.

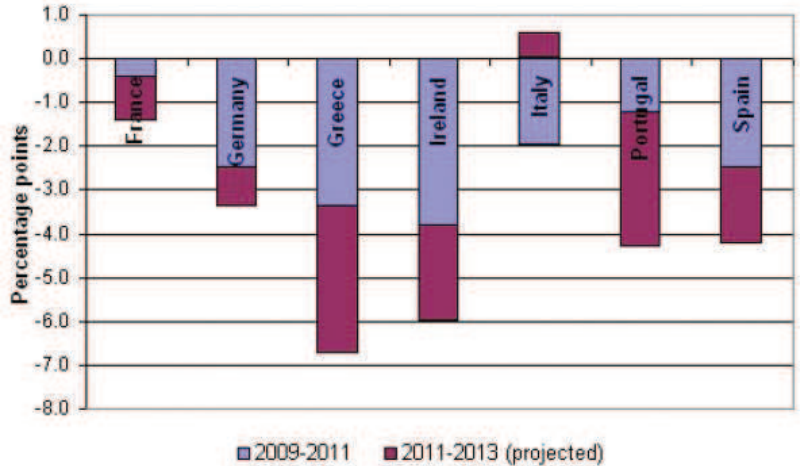
Figure 2. Youth (aged <25) unemployment, EU and constituent countries (not seasonally adjusted)



Source: Eurostat

A final feature of this recession attempts by European governments to bring about fiscal consolidation. These have taken the form of quantitative easing, tax rises and austerity drives – with different emphases on each element in different settings. Austerity packages are potentially very important in the extent to which they impact upon a wide array of support mechanisms surrounding the family. These range from direct contributions through family policy initiatives and other welfare provisions through to the impact upon a declining number of jobs and opportunities in the public sector. As Figure 3 demonstrates, these changes in government expenditure have been negative – and are projected to be deeper – in many settings across Europe, but especially in the so-called 'PIIGS'.

Figure 3. Change in Government expenditure/GDP



Source: Economist, 2012

It is important to note the changing social and economic *context* of the current Recession. This can help us to examine the extent to which the theoretical lessons from earlier economic shocks are useful. Such factors include the later overall age of childbearing which means that older women who postpone are left with a smaller time window to catch-up; the near 'universality' of the recession across the continent (unlike the Northern- and Eastern-European recessions of the early 1990s). This could have a reinforcing effect in prolonging the recession and austerity drives in certain countries through the interconnectedness of the international bond market. Finally, the institutional context is quite different – not least through the widespread adoption of austerity measures. Beyond this, significant changes in the family and household structures, patterns of partnership formation as well as ongoing labour market alterations and pension reforms mean a very different context in the 2010s to, say, the 1970s. Consider, for example, the rise of short-term, fragile employment and the wider context of the dualisation of the labour market (Davidsson and Nacyk, 2009). Furthermore, compared to earlier recessions, the female labour force participation ratio [FLFPR] is significantly higher than previous recessions, which could affect the inter-relationship between the labour market, recession and fertility.[1] In Italy, for example, the FLFPR in 1970 was just over 30% compared to 63% in 2010. Similarly in Greece the FLFPR rose from 59% in 1990 to 78% in 2010 (OECD, 2012). This could have a profound impact upon the theoretical appraisals outlined above.

2.3 'The Great Recession' and recent trends in pTFR in Europe

In Table 1, we present a very simple expression of year-on-year trends in TFR in each EU country from 2002 to 2010. If fertility in year *x* is greater than or equal to

[1] For a full series of OECD data, see [http://dx.doi.org/10.1787/lfs-data-en]

2% higher than in year *x*-1, it is shaded green. If, however, fertility in year *x* is greater than or equal to 2% lower than in year *x*-1, it is shaded red. If fertility is between -2% and +2% then it is deemed to be 'stagnated' and coloured red. Clearly, different patterns are in evidence across the EU. In many countries, the 2000s generally saw an upturn in period TFR, largely as a result of the tempo effect of postponement. In 2008, for example, pTFR was rising in every country in Europe (apart from a marginal decline in Luxembourg). However, in all but six EU countries, period TFR either declined in 2010 or stagnated. Latvia saw the most pronounced decline as the country grappled with extremely high unemployment and a massive contraction of the economy. In Hungary, Malta and Romania, stagnation to decline while in Bulgaria, Cyprus and, to an extent, Slovakia, recent increases were sharply turned into declines. For most countries, meanwhile, recent increases in fertility turned to stagnation in 2010 (with the exceptions of Denmark and Spain). Luxembourg, Sweden, Germany, Slovenia, Portugal and Austria each saw modest increases in fertility during 2010.

Table 1. Year-on-year percentage change in pTFR, EU member states, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Latvia		4.31	-3.64	5.47	3.17	4.22	2.77	-9.19	-10.72
Hungary	-0.45	-2.37	0.32	2.40	2.56	-1.80	2.41	-1.95	-5.40
Bulgaria	0.66	1.73	4.31	2.18	4.83	2.83	4.43	5.90	-5.14
Cyprus	-4.84	0.44	-0.75	-4.74	2.26	-4.34	5.52	3.23	-4.69
Malta	-1.43	2.08	-6.05	-1.22	1.07	-1.48	5.13	-0.59	-3.89
Romania	-1.21	1.09	1.89	2.29	-0.36	-1.51	4.43	1.58	-3.22
Poland	-5.10	-2.04	0.34	1.30	1.94	3.12	6.41	0.55	-1.09
Greece	1.40	1.16	1.57	2.28	5.15	0.83	6.78	0.89	-1.05
Slovakia	-1.27	1.24	3.45	0.99	-1.08	0.96	5.46	6.91	-0.82
Spain	1.47	3.78	1.42	1.26	2.51	1.11	4.99	-4.80	-0.70
Italy	1.49	1.28	3.56	-0.81	2.19	1.67	3.14	-0.19	0.03
Ireland	1.62	-0.48	-1.50	-3.62	3.16	4.88	2.79	0.07	0.04
Czech Rep.	2.48	0.63	4.06	4.53	3.64	8.20	4.23	-0.34	0.05
Netherlands	1.24	0.90	-1.22	-1.01	0.69	-0.15	3.21	0.99	0.28
Lithuania	-4.69	2.11	-0.09	0.90	2.69	3.58	8.63	5.20	0.29
Finland	-0.47	2.45	2.30	0.15	1.89	-0.43	0.94	0.96	0.31
Estonia	2.66	-0.10	6.92	2.17	3.20	5.59	1.32	-1.85	0.40
France	-0.76	0.56	1.24	1.23	3.07	-1.02	1.50	-0.18	1.19
Denmark	-1.16	1.99	1.29	1.00	2.64	-0.23	2.46	-2.59	1.72
UK	0.58	4.57	3.18	0.88	3.52	3.13	2.85	-0.69	1.78
Luxembourg	-1.78	-0.56	2.70	-2.03	1.20	-2.31	-0.15	-1.16	2.49
Sweden	5.23	3.83	2.32	0.98	4.79	1.37	1.48	1.50	2.56
Germany	-0.54	-0.12	1.42	-1.36	-0.64	2.96	0.72	-1.58	2.59
Slovenia	0.10	-0.87	3.75	1.21	4.22	5.15	10.47	0.39	2.70
Portugal	0.94	-2.01	-2.87	0.30	-3.19	-2.01	3.02	-3.71	3.20
Austria	4.75	-1.30	3.13	-0.81	0.09	-1.77	2.13	-1.60	3.39

Source: Eurostat

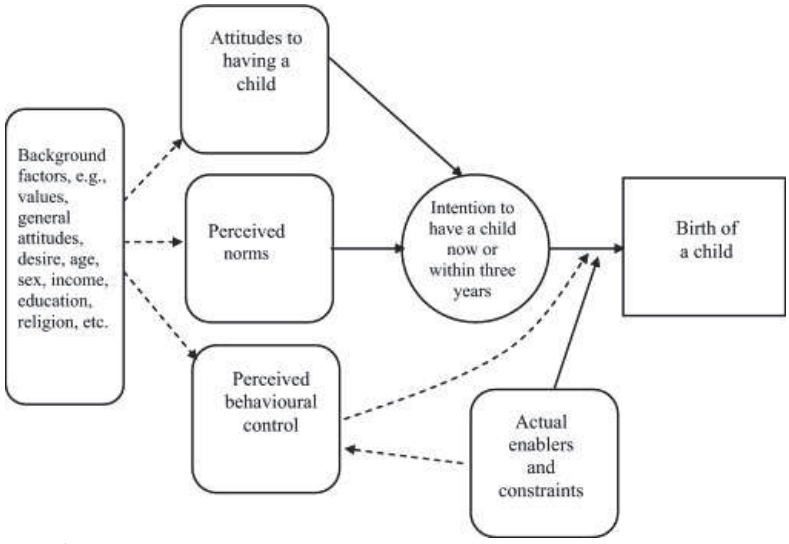
2.4 Fertility Intentions and Ideals

To recapitulate, there is strong theoretical evidence that economic shocks – especially as mediated through unemployment – impact negatively upon pTFR. In the current 'Great Recession', there is also clear evidence of both declines in pTFR as well as stagnation, or what might be better termed in the correct temporal context as 'stalled increases'. We have already identified the seriousness of this 'Great Recession' in terms of both absolute and relative changes in unemployment, especially among the young. Furthermore, we have identified the somewhat new contexts in terms of both micro- and macro-institutional contexts – namely recent shifts in familial and

household labour and modes of support as well as the ongoing austerity packages driven by the sovereign debt crisis.

However, to better understand the impact of economic uncertainty on fertility we look at the relationship between economic crisis and individuals' reproductive decision-making which plays an important role in shaping fertility outcomes (Morgan, 2001). Individuals and societal attitudes and norms surrounding families and partnerships are an important mediator in the relationship between economic context and fertility outcomes. This has been theorised in the Theory of Planned Behaviour (Ajzen, 1991), and applied by Billari et al. (2009); and Dommermuth *et al*. (Dommermuth et al., 2011) to fertility ideals and intentions (See Figure 4). The TPB (Ajzen 1991) posits that intentions are the most proximate determinant of the corresponding behaviour. According to this theory, intentions are formed under the immediate influence of three groups of factors: (a) personal positive and negative attitudes towards the behaviour, i.e., having a child; (b) subjective norms, i.e., perceived social pressure to engage or not to engage in the behaviour; and (c) perceived behavioural control, i.e., the ability to perform the behaviour, which may depend, for example, on the availability of housing, income, or other resources (Figure 4). Billari, Philipov, and Testa (2009), who have applied the general theory to the case of fertility, showed that the transition to parenthood is mainly driven by the existent normative pressure and individual personal attitudes towards childbearing, while perceived behavioural control plays a bigger role in the decision to have a second child.

Figure 4. A model of fertility decision-making based on the Theory of Planned Behaviour



Source: Ajzen 1991

In Section 2.1, we identified that consumer confidence as a marker of economic cycles has been linked to fertility. However, this is just one element of micro- or macro-level perception of societal trends which could impact upon fertility. For example, the relationship between happiness – potentially an important micro-level reflection of macro-level trends mediated through individual personalities – and fertility has been explored in great depth (Margolis and Myrskylä, 2011). Indeed, these interactions lie at the heart of the micro-macro decision-making processes and, to use Easterlin's expression, the 'conflict between resources and aspirations' (Easterlin, 1976b).

3. Data and Methods

3.1 The Sample

The empirical analysis is based on the Eurobarometer survey carried out in 2011 in the 27 EU countries. The stratified sampling procedure assures nearly equal probability samples of about 1,000 respondents in each of the countries. The sample size allows us to make equally precise estimates for small and large countries, as well as to make comparisons between sub-groups broken down by sex, age, education, marital status, and so on. The survey used a single uniform questionnaire design, with particular attention being paid to equivalent question wording across languages. The format is face to face interview.

Our analytical sample consists of 5652 men and women aged 20 to 45 who answered the question on fertility intentions, including 3556 childless respondents, 2096 respondents with only one child. The non-response rate was around 12%. A missing answer may be symptomatic of certain fertility plans (Morgan 1981 and 1982). However, we simply excluded from the analysis all individuals who did not report any intended family size in order to avoid potential complications given the absence of auxiliary information on this item. The results obtained from the analysis run on the sub-set of valid responses are reliable under the standard "missing at random assumption" (Little and Rubin 2002).

The models are formally based on two levels: individuals and countries (referred to as "clusters") as described in Table 2. As is shown in this table, the hierarchical structure is quite unbalanced. This lack of balance is not a problem, as it is efficiently handled by maximum-likelihood methods. The number of clusters and their sizes are sufficient to achieve high levels of power and accuracy of the asymptotic distributions of the estimators (Snijders and Bosker 1999), and thus allow for reliable inferences.

T**able 2.** Structure of the data: respondents aged 20 to 45 by country and parity

COUNTRIES	Parity		
	0	1	2
Austria	174	75	103
Belgium	149	71	112
Bulgaria	104	107	118
Cyprus	98	24	49
Czech Rep.	145	101	162
Denmark	122	57	93
Estonia	115	95	110
Finland	91	44	74
France	123	76	111
Germany east	103	47	40
Germany west	124	55	70
Greece	209	68	92
Hungary	130	95	119
Ireland	96	73	86
Italy	169	83	99
Latvia	151	147	122
Lithuania	141	82	109
Luxembourg	72	43	52
Malta	48	33	47
Netherlands	164	41	86
Poland	95	67	70
Portugal	119	99	94
Romania	135	126	98
Slovakia	125	89	135
Slovenia	137	67	84
Spain	177	86	118
Sweden	85	49	56
U. Kingdom	155	96	91
Total	3556	2096	2600

Note. The totals do not correspond with those given in the models because of missing values for some of the variables considered in the multivariate analysis.

3.2 Response Variable: Lifetime Fertility Intentions

Measuring childbearing intentions can present challenges, as intentions encompass several dimensions. The first distinction is between intentions/plans and ideals/desires: the number of children an individual intends/plans to have may not be the same as the number of children individuals would ideally like to have given no constraints. A second distinction is made between lifetime intentions (so-called child-number intentions) and short-term intentions (so-called child-timing intentions), which are

parity-specific. Lifetime fertility intentions refer to the number of children individuals want to have over the whole life course and short-term intentions refers to a short-term framework to which the intentions are confined. Here the focus is on child-number intentions, which reflect concrete plans over the individual's reproductive career and is coded as a four-category variable: zero, one, two, and three or more children. Values greater than or equal to three are, in light of their low frequency, collapsed into a single category. The variable is surveyed through the following questionnaire item: "*How many more children do you intend to have?*" This prospective item comes immediately after the question about the number of children already had ("*How many children, if any, have you had?*") and is clearly intended to provide information about the number of births respondents plan to have over (the rest of) their reproductive careers. Neither of the above-mentioned questions makes a distinction between biological and adopted children.

Information on the certainty levels of lifetime fertility intentions is also used in the analysis. The survey item is worded as follows: "*How certain are you that you will have the number of children that you have just mentioned*?" Response options are: "very sure", "fairly sure", "not very sure", and "not at all sure". All of the respondents who provided a valid numerical answer other than "0 child" to the question on the number of children they intend to have also provided a valid answer to the question about their certainty level. To incorporate uncertainty into the fertility intentions we decrease the total number of children intended by one if individuals reported to be "not very" or "not at all sure" of achieving their target. Similarly, at the aggregate level, the mean values of the additionally intended number of children are weighted with the proportion of individuals who reported to be sure, either "very" or "fairly" all their intended births.

The above mentioned questions on actual, additionally intended and certainty about intentions are asked also in the 2006 round of the Eurobarometer survey by using the same question wording. Importantly, the same questions appeared in exactly the same order in the two survey's questionnaires. This circumstance allows a dynamic analysis through a quasi-panel analysis which reveals trends for population sub-groups but do not allow the exact tracking of individual over time and, hence, does not capture individuals decline over time in the ultimately intended family size. In this part of the analysis the response variable is the difference in the cohorts' reproductive intentions between 2006 and 2011.

3.3 Explanatory Variables

The explanatory variables included in the models are: age, sex, school enrolment, level of education, marital status, employment status, and self-location on the social scale. All of the covariates refer to the time of the interview. Unfortunately, the data do not carry any retrospective information concerning the previous history of respondents, which would have allowed me to estimate the role of biographical trajectories on the process of forming family size intentions in a dynamic framework.

The age of respondents is the only continuous covariate. It is centred on the rounded mean value of 33 years. As all of the other covariates are categorical, they are transformed into suitable dummy variables. Some collapsing of the categories is often needed: in such cases, several alternative collapsing schemes are tried in the model selection process. In the following, the covariates are described together with the categorisation used in the final models.

The marital status is codified using four categories: single, married, cohabiting, and separated. The last category also includes divorced respondents, while the married respondents are grouped together with the remarried and the widowed people.

The educational level is measure in the survey with the following question: "*How old were you when you stopped your full-time education?*" In the analysis it is included as a three-category variable with low (up to 15 years) medium (between 16 and 19) and high (20 years or above) level of education. A dummy variable indicating whether respondents are still enrolled in education is also included in the models.

The employment status has just two categories: employed respondents and people not in the labour market or unemployed. A more refined breakdown of the variable is not supported by the data.

The respondents' perceived country and individuals' own economic conditions were measured with the following three questions: "*How would you judge the current situation in each of the following?*", "*What are your expectations for the next twelve months: will the next twelve months be better, worse or the same, when it comes to ...?*", and "*Compared with five years ago, would you say things have improved, gotten worse or stayed about the same when it come to ...?*" the same 15 different items were listed in the same order in each of these three questions. Response options were for the question on the past and future situation '*better*' '*worse*' '*same*' '*don't know*', and for the question on the current situation '*very good*' '*rather good*' '*rather bad*' '*very bad*' '*don't know*'. Out of the 15 items we selected five linked with economic aspects, namely: the cost of living, the affordability of housing, the economic situation and the employment situation in the country, the individual's household's financial situation and the individual's personal job situation. While the prospective, retrospective, and current assessment envisioned in the items mentioned above have been all used in the descriptive analysis, only the assessments of the past situation have been included in the regression models, each of them has been coded as a dummy equal to 1 if a worsening of the situation was perceived, and 0 otherwise.

The country-level explanatory variables included in the models are as follows: the unemployment rates, the youth unemployment rates, the gross domestic product (GDP) in purchasing power standards (PPS) as of 2006 and 2011, both taken from the Eurostat database; the share of enrolment in formal childcare for preschool children aged three, taken from OECD Family Database 5 (year 2008); the year of the onset of fertility postponement, kindly provided by Tomáš Sobotka; and the Gender Empowerment Measure, taken from the 2006 Annual Report made by the United Nations Development Programme.

The volume index of GDP per capita in purchasing power standards is expressed in relation to the European Union (EU-27) average, set to equal 100. If the index of a country is higher than 100, this country's level of GDP per capita is higher than the EU

average, and vice versa. The basic figures are expressed in PPS; i.e., in a common currency that eliminates the differences in price levels between countries, which allows for more meaningful volume comparisons of GDP between countries. If it is referred to one single year, either 2006 or 2011, the variable is used in its logarithmic transformation. This covariate should reflect the cross-country differences in socio-economic conditions at the time when the fertility intentions were reported by the respondents. Changes in the unemployment rates and GDP per capita are computed in absolute values, for the GDP the variables not transformed are used to this aim.

A description of all the variables used in the models is reported in Table 3.

Table 3. Description of the individual- and country-level variables used in the analysis, ages 20-45.

a) Individual-level variables (percentage distributions)

	Parity			
	0	1	2+	All
Age (average)	29	34	37	33
Female	45	62	62	55
Male	55	38	38	45
Married	16	62	75	50
Cohabiting	26	18	12	19
Single	56	11	5	25
Separated	2	9	8	6
Low education	6	10	13	10
Medium education	40	53	53	48
High education	35	36	33	34
Enrolled in education	20	1	1	8
Employed	64	74	72	70
Unemployed or inactive	36	26	28	30
Low self-positioning on the social scale*	45	53	53	50
High self-positioning on the social scale	55	47	47	50
Perceiving a worsening in the country they live over 2006-2011 in:				
Cost of living	77	83	83	80
Affordability of housing	65	68	69	67
Economic situation	69	70	74	71
Employment situation	63	64	69	65
Household's financial situation	27	35	38	33
Personal job situation	23	30	30	27

Note. *Respondents were asked to position themselves on the social scale. The scale had 10 levels: one for the lowest level in the society and 10 for the highest level in the society

Table 3. (continued)

b) Country level variables

	2011		2006		2011	2006			
	Unempl. rates	Y.Unempl. rates	Unempl. rates	Y.Unempl. rates	GDP per capita.	GDP per capita	ONSET	GEM	CHILD CARE
Austria	4	8	5	9	129	125	1974	0.82	69
Belgium	7	19	8	21	118	118	1976	0.86	98
Bulgaria	11	25	9	18	45	37	1993	0.60	75
Cyprus	8	22	5	10	92	91	1986	0.58	85
Czech Rep.	7	18	7	18	80	77	1992	0.62	67
Denmark	8	14	4	8	125	124	1976	0.86	96
Estonia	12	22	6	12	67	65	1971	0.61	85
Finland	8	20	8	19	116	114	1972	0.85	70
France	10	23	9	22	107	109	1972	0.72	94
West Germany	6	9	10	14	120	116	1972	0.82	93
East Germany	6	9	10	14	120	116	1994	0.82	93
Greece	18	45	9	25	82	93	1980	0.61	61
Hungary	11	26	8	19	66	63	1984	0.56	79
Ireland	15	30	5	9	127	145	1980	0.75	93
Italy	8	29	7	22	101	104	1982	0.65	91
Latvia	16	31	7	14	58	52	1977	0.62	66
Lithuania	15	33	6	10	62	55	1994	0.64	57
Luxembourg	5	17	5	15	274	272	1995		51
Malta	7	14	7	16	83	77	1973	0.49	55
Netherlands	4	8	4	8	131	131	1985	0.84	89
Poland	10	26	14	30	65	52	1972	0.61	30
Portugal	13	30	9	20	77	76	1992	0.68	64
Romania	7	24	7	21	49	38	1984	0.49	67
Slovakia	14	33	13	27	73	63	1992	0.60	77
Slovenia	8	16	6	14	84	88	1992	0.60	67
Spain	22	47	9	18	99	105	1984	0.78	91
Sweden	8	23	7	22	126	121	1980	0.88	92
U. Kingdom	8	21	5	14	108	120	1973	0.76	89

Legend: ONSET: Year of onset of fertility postponement; GEM: Gender Empowerment Measure; CHILD CARE: Children under age three in childcare services.
Source: Eurostat for GDP; Labour Force Survey of women in higher education; OECD family policy database for children under age three enrolled in childcare services; United Nations Development Programme, Report 2006, for gender empowerment measure; T. Sobotka (2004: 53, Table 3.3) expanded and updated by the author, for the year of the onset of fertility postponement.

3.4 The Models

Two sets of multilevel models are run. Ordinal multilevel regression models are used to regress the additionally intended number of children at the time of the 2011 survey on a set of individual –level covariates related to the year 2011 as well as a set of country-level variables which refers either to the year 2006 or to the change occurred in the period 2006-2011. Multinomial regression models are used to regress the temporal changes in reproductive intentions on a set of country-level variables, among which the changes in the youth unemployment rates occurred between 2006 and 2011. This analysis is run on a pooled dataset containing both the 2006 and the 2011 cross-sections which are merged by age cohorts. In this quasi-panel models age cohorts are the units of analysis and the response is the difference in the mean additionally intended number of children of a given age cohort between 2006 and 2001. In the quasi-panel data repeated cross-section surveys are used and cohorts can be followed overtime in a way that is analogous to the way individuals can be followed in the true panel data. The advantage of this type of data is that unobservable characteristics of groups of individuals can be dealt with just as individual "fixed effects" can be dealt with using panel data. Cross-section of age profiles are biased by unobservable differences across cohorts because in a cross section age and birth cohort are (perfectly) correlated; the time series elements quasi panel allows age and cohort effects to be disentangled (Browning et al. 1985).

4. Results

4.1 Descriptive Analysis

At the EU-15 level the mean ultimately intended family size of women and men in reproductive ages has been at around two children in the decade 2001-2011 (Figure 5). A similar stability can be observed also in other age groups for the ultimately intended as well as the personal ideal family size (Figure 6).

Figure 5. Mean ultimately intended family sizes, women and men 20-45 years old, EU-15

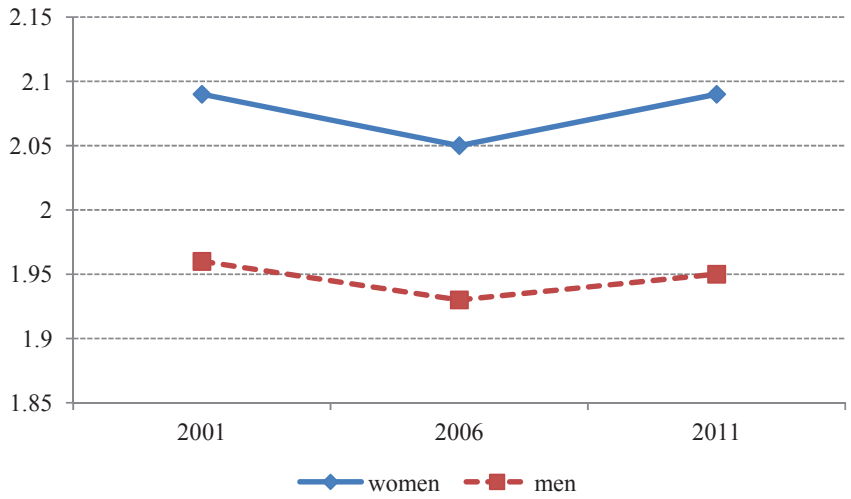
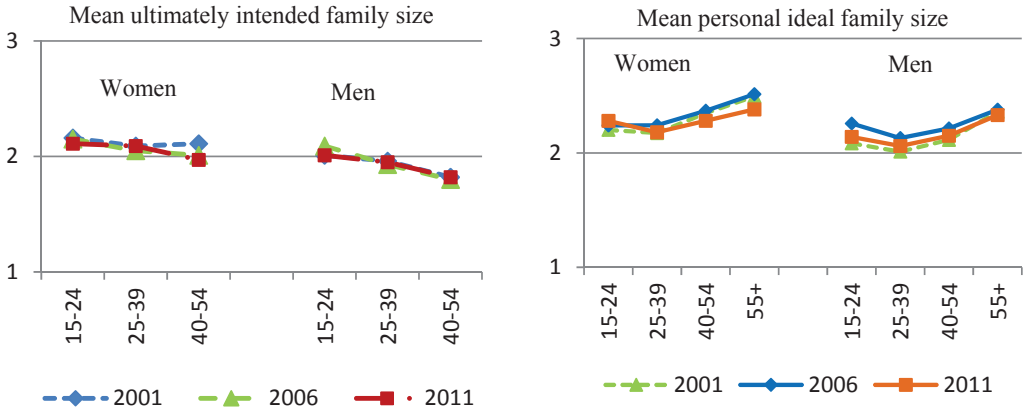


Figure 6. Mean ultimately intended and personal ideal family sizes by gender and age, EU-15



This temporal constancy averages different country patterns. In Greece a decline in the mean ultimately intended family size is observed between 2006 and 2011. The decrease - which is visible looking at the simple mean values (Figure A.1, Appendix) - becomes even more evident after incorporating the uncertainty component in the additionally intended number of children (Figure 7). Uncertainty increases in many EU countries in the period 2006-2011 and the increase is particularly pronounced in Greece (about plus 21 percentage points), Ireland (+17), Portugal (+14) and Spain (+12); while it is less than 10 percentage points in most of the other

countries; in six of them a decline of uncertainty is registered (namely: Finland, Luxembourg, Belgium, Netherlands, Italy, Malta, Poland and Hungary).

Taking into account the uncertainty attached to the reported fertility intentions, Greek men aged 20-39 have a mean ultimately intended family size about 0.6 lower in 2011 than in 2006; among women the decrease ranges between 0.1 (ages 15-24) and 0.6 (ages 40-54). In no other EU country the decline has been so pervasive and of such an extent. Among the other PIIGS countries only Ireland shows a decrease of a similar magnitude: 0.5 for women aged 14-25 years and 0.7 for men aged 45-54 years. In the rest of the PIIGS countries if a decrease occurs, it involves either only women or men, or only specific age groups: in Portugal only women aged 25-54 (-0.2) and men aged 40-54 (-0.3); in Spain only men aged 15-39 (-0.25). In Italy the mean values increase among women aged 15-39 and men aged 25-54 (Figure 7).

Figure 7. Mean ultimately intended family size in the PIIGS countries and EU-27, 2006 and 2011.

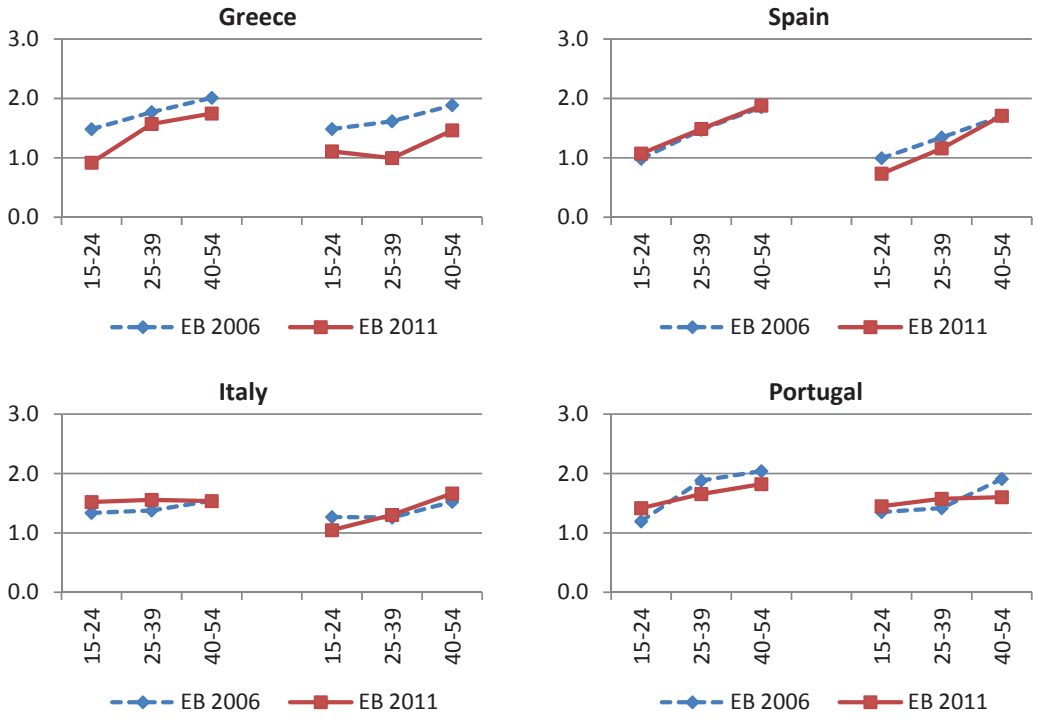
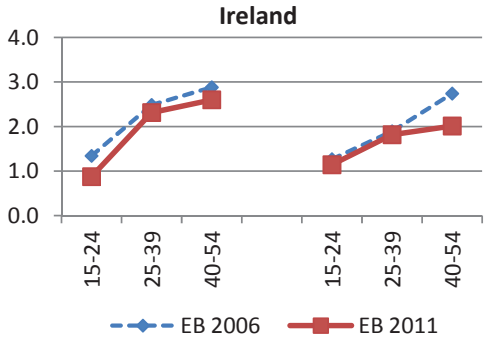


Figure 7. (continued)

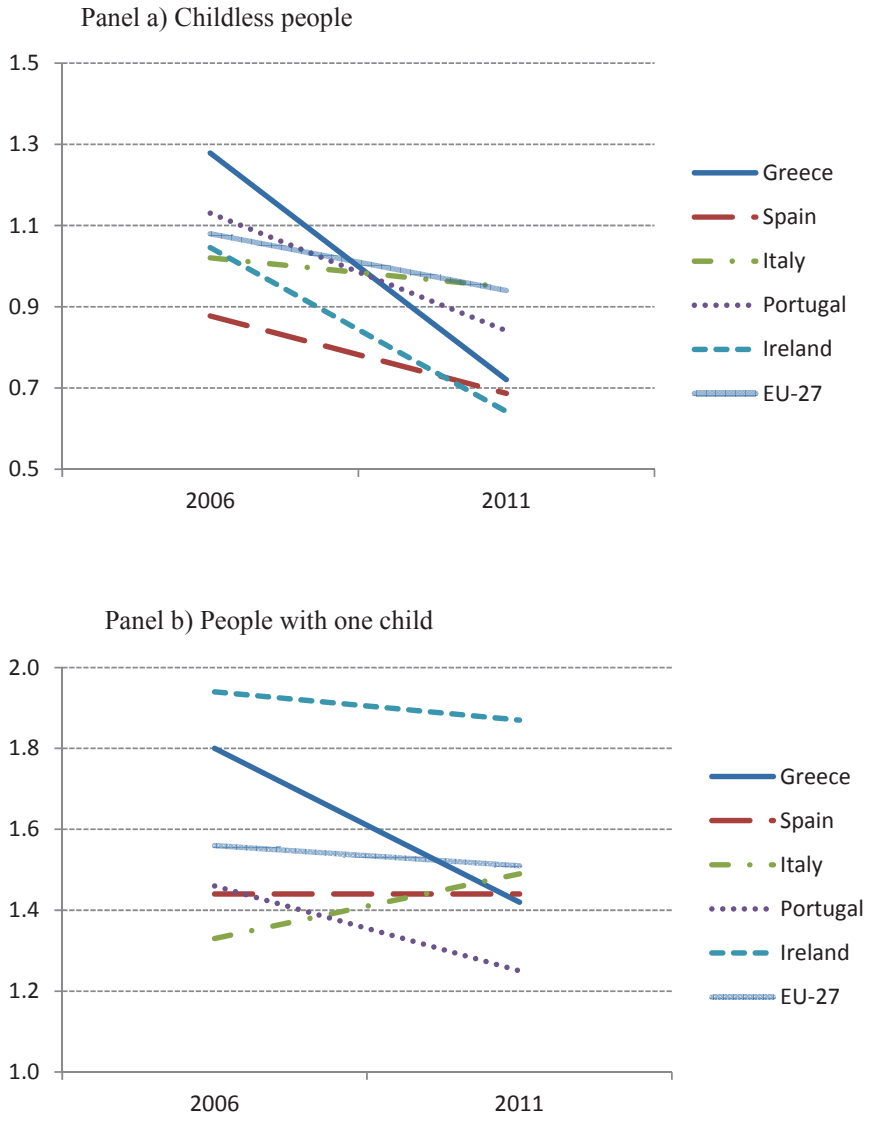


Note. Mean additionally intended number of children is weighted with the proportion of people who declare to be sure (either very or fairly) to reach the stated number of children

In Figure 8 we depict the temporal changes in the mean ultimately intended family size for people (childless and with one child) in the prime reproductive ages (20-45 years), in the PIIGS countries and the EU-27 as a whole. As we may see, the slope of the Greek curve is steeper than that of any other PIIGS country in both the childless sub-sample (Figure 8, panel a) and the sub-sample of those with one child (Figure 8, panel b). At parity zero, Greece is followed by Ireland and Portugal, which experience also a non-marginal decline in fertility intentions, and next, by Spain and Italy with just a very marginal decline, as in the whole EU-27 (Figure 8, panel a). At parity one, a similar pattern is observed, with the exception of Italy which records a temporal increase of the ultimately intended family size in the period; and Spain, which does not register any decrease. Ireland takes values clearly higher than all the other PIIGS countries; these values are exceptionally high also in the EU-27 context.

One could argue that the decline observed in the 5-year window 2006-2011 is only a part of a long-term declining temporal trend of lifetime fertility intentions. However, if we look at the 2001 mean values we see that there is almost no change in the mean ultimately intended family size in the previous 5-year period, 2001-2006. Unfortunately, we are not able to go back to earlier periods because information on intended family size is not included in earlier Eurobarometer surveys (1979 and 1998) but a piece of evidence bolstering our findings is the temporal decline registered also in the mean personal ideal family size, a measure which is supposed to be more stable over time given that it reflects childbearing attitudes rather than concrete reproductive plans (Testa 2012).

Figure 8: Mean ultimately intended family size in the PIIGS countries and EU-27, Women and men aged 20-45, 2006 and 2011.



Note. The temporal differences in the mean ultimately intended family size are statistically significant for Greece, and also for Ireland and Portugal in the childless sub-sample.

The decline in the mean ultimately intended family size goes hand in hand with people's perception of the economic situation of their country they live in (Table 4). A general pessimism is common to all Europeans but Greeks are clearly more pessimistic than the former especially for aspects concerning their personal job situation and their household's financial situation at the time of the survey and in the short-term past. 72% of Greeks reports a worsening in the household's financial situation in the last five years while the percentages are considerably lower in most of the other EU

countries. Among the PIIGS they are only slightly above 50% in Ireland and Portugal, and only 29% and 42%, respectively, in Italy and Spain. In Bulgaria, Romania, Hungary and Latvia shares are also close to 50% while in the other EU countries only a minority of people in reproductive ages have a pessimistic view about the financial condition of household. Most importantly, unlike the other PIIGS countries, Greeks do also have negative expectations for the future: 60% of them expect a further worsening of their financial situation while the percentage is only 30% in Portugal, 26% in Ireland and 11% in Italy and Spain (Table 4).

Table 4. Women and men (ages 20-45) who assess negatively the situation in the country they live in, values in per cent, Panel a, over the past five years*

	Cost of living	Affordability of housing	Economic situation	Employment situation	Job personal situation	Household financial situation
Austria	62	53	43	39	13	22
Belgium	79	77	66	48	19	20
Bulgaria	83	60	82	80	35	52
Cyprus	90	90	86	87	22	49
Czech Rep.	85	45	82	68	25	39
Denmark	66	43	74	79	19	21
Estonia	90	37	66	72	23	30
Finland	79	79	60	49	11	11
France	91	84	84	73	19	24
Germany east	77	51	31	26	16	23
Germany west	76	40	28	23	12	20
Greece	96	77	98	96	57	72
Hungary	85	78	82	78	54	60
Ireland	81	41	92	91	38	51
Italy	65	57	69	68	28	29
Latvia	91	31	87	84	43	53
Lithuania	66	68	80	72	48	47
Luxembourg	74	82	54	54	7	12
Malta	88	75	63	45	19	32
Netherlands	82	70	82	61	22	22
Poland	73	69	49	46	24	34
Portugal	91	80	89	88	43	56
Romania	87	74	87	84	50	56
Slovakia	87	71	78	71	27	37
Slovenia	91	74	86	84	28	39
Spain	90	85	96	95	40	42
Sweden	54	61	28	38	12	12
U.Kingdom	85	74	83	72	27	32
min values	54	31	28	23	7	11
max values	96	90	98	96	57	72

*Note. Percentage of people who answered 'worse' to the different items.

4.2 Multivariate Analysis

In Table 5 we report the estimates of the multilevel regression models for the intentions to have a given number of children weighted with the certainty levels. For each sub-sample childless and with one child, three models have been estimated: model I empty, model II with the individual level variables and Model III with both individual and country level variables.

As can be seen from the empty models (model I), the variance at the country-level is statistically significant which supports our choice to adopt a multilevel approach. The estimates of models II reveal that lifetime fertility intentions are positively correlated with a high individual's self-positioning on the social scale while they are negatively correlated with the unemployment status at parity zero. At parity one the unemployment status is no longer relevant but the level of education and the position in the social scale have both a positive and statistically significant effect on intentions. Importantly, individuals who negatively assessed their country economic situation and their household's financial situation in the short-term past are more likely to plan smaller family sizes at parity zero. Similar effects are observed at parity one but the coefficients lose their statistical significance in this case. In Models III it appears clear that none of the country level variables but the perceived worsening of the employment situation is statistically significant although their inclusion explain a non-marginal portion of the country-level variance that goes down from 0.17 to 0.10 in the childless sub-sample and from 0.13 to 0.07 in the sub-sample of people with one child (Table 5). The finding that in countries with a high share of people perceiving a worsening in the employment conditions in the country has a positive effect on the individual's fertility intentions is a counterintuitive result that should be double checked, but in principle, it could be explained by the fact that countries where the conditions were actually worsening over time are also those in which fertility intentions are higher (for example in Ireland and Greece) than in other EU countries which experienced better economic trends in the short-term past.

Table 5. Random intercept ordinal regression models for a given number of additionally intended children, ages 20-45, beta coefficients

	Childless people			People with one child		
	Model I	Model II	Model III	Model I	Model II	Model III
Individual-level variables						
Age-33 (average)	-	-0.15 ***	-0.15 ***	-	-0.17 ***	-0.17 ***
(Age-33)^2	-	-0.01 ***	-0.006 ***	-	-0.008 ***	-0.008 ***
Female (reference)	-	0	0	-	0	**0**
Male	-	0.16 *	0.16 *	-	0.56 ***	0.56 ***
Married (reference)	-	0	0	-	0	0
Cohabiting	-	0.05	0.05	-	0.17	0.15
Single	-	-0.37 ***	-0.37	-	-0.48 **	-0.47 *
Separated	-	-0.54	-0.54	-	-1.24 ***	-1.24 ***
Low education (reference)	-	0	0	-	0	0
Medium education	-	0.04	0.04	-	0.29	0.31 *
High education	-	0.20	0.20 *	-	0.76 ***	0.75 ***
Enrolled in education	-	0.53 **	0.53 ***	-	1.20 **	1.09 ***
Employed (reference)	-	0	0	-	0	0
Unemployed	-	-0.30 **	-0.30 ***	-	0.02	-0.03
Low pos. on social scale (reference)	-	0	0	-	0	0
High pos. on social scale	-	0.35 ***	0.35 ***	-	0.39 **	0.38 **
Perception of worsening in:						
Cost of living	-	-0.07	-0.07	-	0.02	0.05
Affordability of housing	-	0.07	0.08	-	0.09	0.10
Economic situation	-	-0.20 *	-0.22 *	-	-0.08	-0.11
Employment situation	-	0.13	0.10	-	-0.06	-0.11
Household financial situation	-	-0.26 **	-0.27 ***	-	-0.23	-0.20
Personal job situation	-	-0.07	-0.07	-	0.08	0.09

Continues on the next page

Table 5. (Continued)

	Childless people			People with one child		
	Model I	Model II	Model III	Model I	Model II	Model III
Country-level variables						
Share of people reporting a worsening in:						
Cost of living in the country	-	-	-0.08	-	-	-0.30
Affordability of housing in the country	-	-	-0.06	-	-	-0.31
Country economic situation	-	-	-1.64	-	-	-0.91
Country employment situation	-	-	2.90 ***	-	-	2.58 *
Household financial situation	-	-	1.26	-	-	-2.88
Personal job situation	-	-	-2.02	-	-	1.35
First cutpoint	-0.97 ***	-0.80 ***	-0.28	0.42 ***	0.74 **	0.71
Second cutpoint	0.25 ***	0.67 **	1.19	2.19 ***	2.87 ***	2.85
Third cutpoint	2.44 ***	3.03 ***	3.55 ***	4.44 ***	5.22 ***	5.21
Variance at the country level	0.21 ***	0.17 ***	0.10 ***	0.18 ***	0.13 ***	0.07 ***
Number cases	3292	3292	3292	2041	2041	2041

* p<0.05; ** p<0.01; *** p<0.001.

In Table 6 we report the estimates of the multinomial logistic regression models for the changes in the fertility intentions occurred in the period 2006-2011. The response variable is equal to -1 if a decrease occurred; 0 if constancy was observed and +1 if an increase was registered. As can be seen, the increase in youth unemployment rates between 2006 and 2011 negatively affect the chance of an increase or a constancy of fertility intentions over the same time period. The results are robust when we consider the changes in unemployment rates rather than those in the youth unemployment rates, but in this case the magnitude of the coefficients decrease. Interestingly, those countries with a high level of GDP per capita in 2006 are experiencing the higher chance of a temporal increase of fertility over time.

Table 6. Multinomial logistic models for the change in the fertility intentions occurred in the 2006-2011 period, Pooled dataset of 2006 and 2011, EB surveys, Beta coefficients

	Childless people			People with one child		
	Fertility intentions over 2006-2011			Fertility intentions over 2006-2011		
	Decrease (base)	Constant	Increase	Decrease (base)	Constant	Increase
Country-level variables						
Onset of fertility postponement	-	0.01	0.01	-	0.06	0.03
Gender Empowerment Measure in 2006	-	-0.02	-0.57	-	-1.22	-2.38
Childcare services for children under age three in 2006	-	-0.001	0.01	-	-0.003	-0.002
Log GDP per capita in 2006	-	-0.03	-0.02	-	1.19 **	1.46 *
Change in youth unemployment rates between 2006 and 2011	-	-0.01	-0.01 *	-	-0.02 *	-0.002
Variance at the country level	0.02 *	0.02 *	0.10 *	0.03 *	0.03 *	0.03 *
Number cases	3292	3292	3292	2041	2041	2041

5. Summary and Discussion

In this paper we have examined the relationship between lifetime fertility intentions and the economic recession by using the Eurobarometer data (2006 and 2011) on individuals clustered in the 27 EU countries. Our findings show that a decline in the ultimately intended family size occurred in Greece and appeared reinforced when uncertainty levels of fertility intentions are taken into account. Uncertainty linked to reproductive plans increased in almost all the PIIGS countries (with the only exception of Italy) and was particularly pronounced in Greece, Ireland, and Portugal.

We collected several pieces of evidence to suggest that this temporal change is linked to the economic crisis. First, we found that people who perceived a worsening in their country's economic situation as well as in their household's financial situation in the period 2006-2011 were more likely to report lower fertility intentions in 2011 than those more optimistic; the effect was particularly strong for childless people. These effects are exerted at the individual but not at the country level. It is remarkable, however, that the individual effect of such subjective assessments remains relevant even after controlling for the status of being unemployed at the time of the survey which, indeed, has a negative and statistically significant effect on lifetime fertility intentions of childless people. Second, we demonstrated that the decrease in the fertility intentions of given age cohorts over the years 2006-2011 was positively associated with the increase in the country's youth unemployment rates in the same period. This result was robust to the inclusion of a set of country-level variables which could be good predictors of intentions' changes, like the GDP per capita, availability of childcare services for pre-school children, or Gender Empowerment Measures in 2006.

At first glance, our study suggests that fertility intentions across the EU have not been largely affected by the "Great Recession". However, as we show in Section 2, the recession has differed hugely in intensity across the continent. In Greece, arguably the hardest hit economy in terms of unemployment and austerity measures brought about as a consequence of the sovereign debt crisis, we observe that fertility intentions have, indeed, been negatively affected. The 'timeline' of the recession is such that we cannot conclude that Greece is such an outlier in terms of the ongoing change in fertility intentions. Since 2011, economic conditions have worsened considerably in Spain, for example. Furthermore, austerity packages in place not just in the 'PIIGS', but also else in the EU are starting to have measurable impacts upon social spending and family policy. To take a further example – Portugal had, until recently, been hailed as a success story in terms of how the population generally acquiesced to austerity measures in the face of a sharp decline in GDP and sovereign debt problems. However, in September 2012 after the announcement of the 2013 budget where Finance Minister Vitor Gaspar confirmed the average income tax rise would increase from 9.8% in 2012 to 13.2% - riots have flared in Lisbon (Telegraph, 2012). This suggests that as the Recession is not yet over, the 'true' picture of the impact upon fertility intentions across Europe may not be seen until after analysis of the 2016 EB. This study, however, does indicate that the stable fertility intentions which have characterised much of Europe over the past ten to fifteen years can, in fact, be responsive to such social and economic developments.

The study has some caveats. With only three cross-sections (only two for intentions weighted by uncertainty) it is not possible to disentangle whether the declining pattern is the result of a long-lasting trend or rather a new pattern which introduces a discontinuity with the past. With the EB we are not able to go further backwards. One possibility could be to compare the EB data with external datasets related to earlier years (before 2001). However, we believe that comparison across time and countries would be hindered by the availability of different fertility intentions measures, given that different question wordings are normally used for measuring fertility intentions in different surveys.

A final observation should be made regarding policy. Bridging the 'gap' between fertility intentions and actualised fertility has been a cornerstone of EU-wide family policy since the era of low- and lowest-low fertility across Europe (MicMac, 2010). While fertility intentions have declined in some settings – and could decline in others – if the 'gap' becomes smaller it will more likely be as a result of a *lack* of supporting social and family policy rather than as a *consequence* of 'bridging the gap.'

APPENDIX

Figure A.1. Mean ultimately intended family sizes by gender and age, 27-EU countries, additionally intended family size not weighted with uncertainty

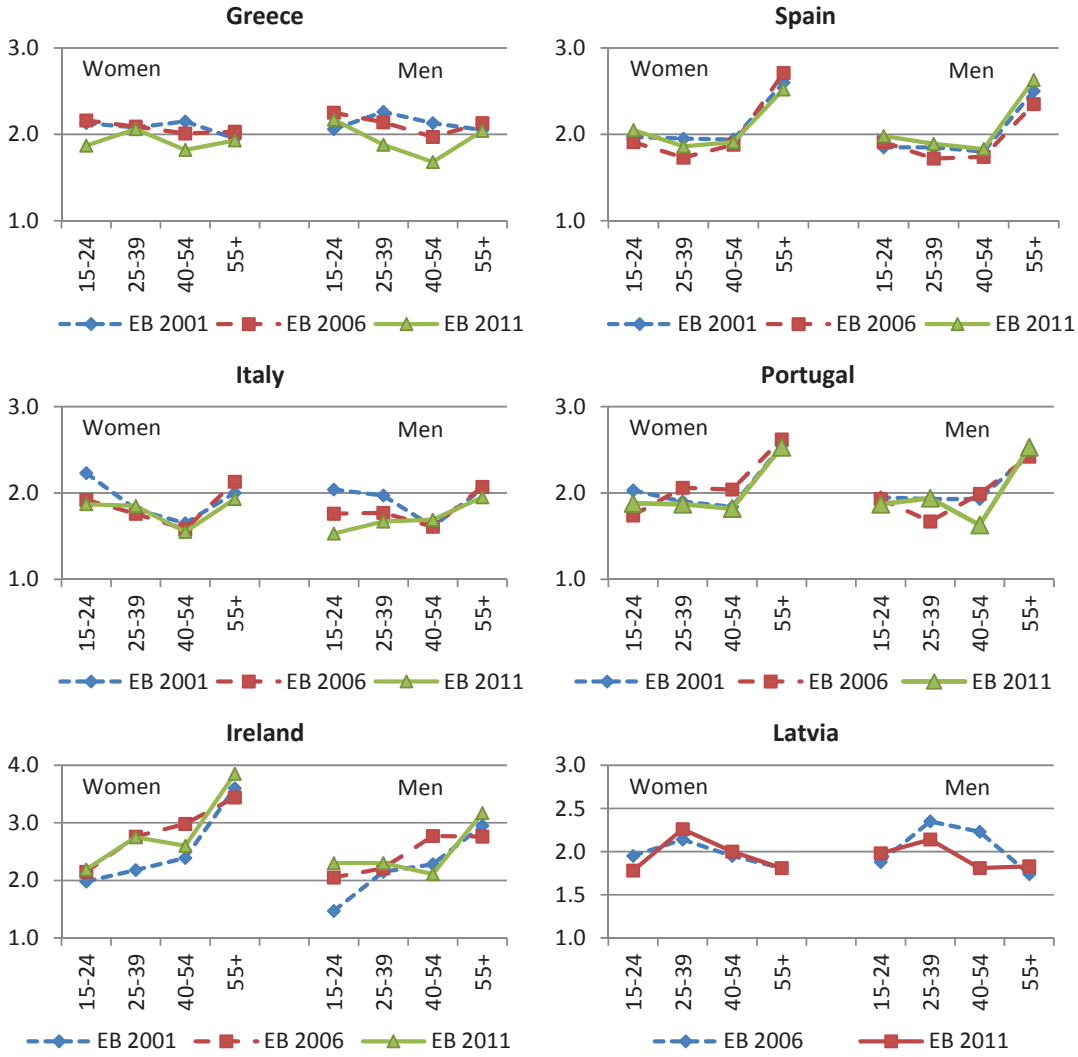


Figure A.1. (Continued)

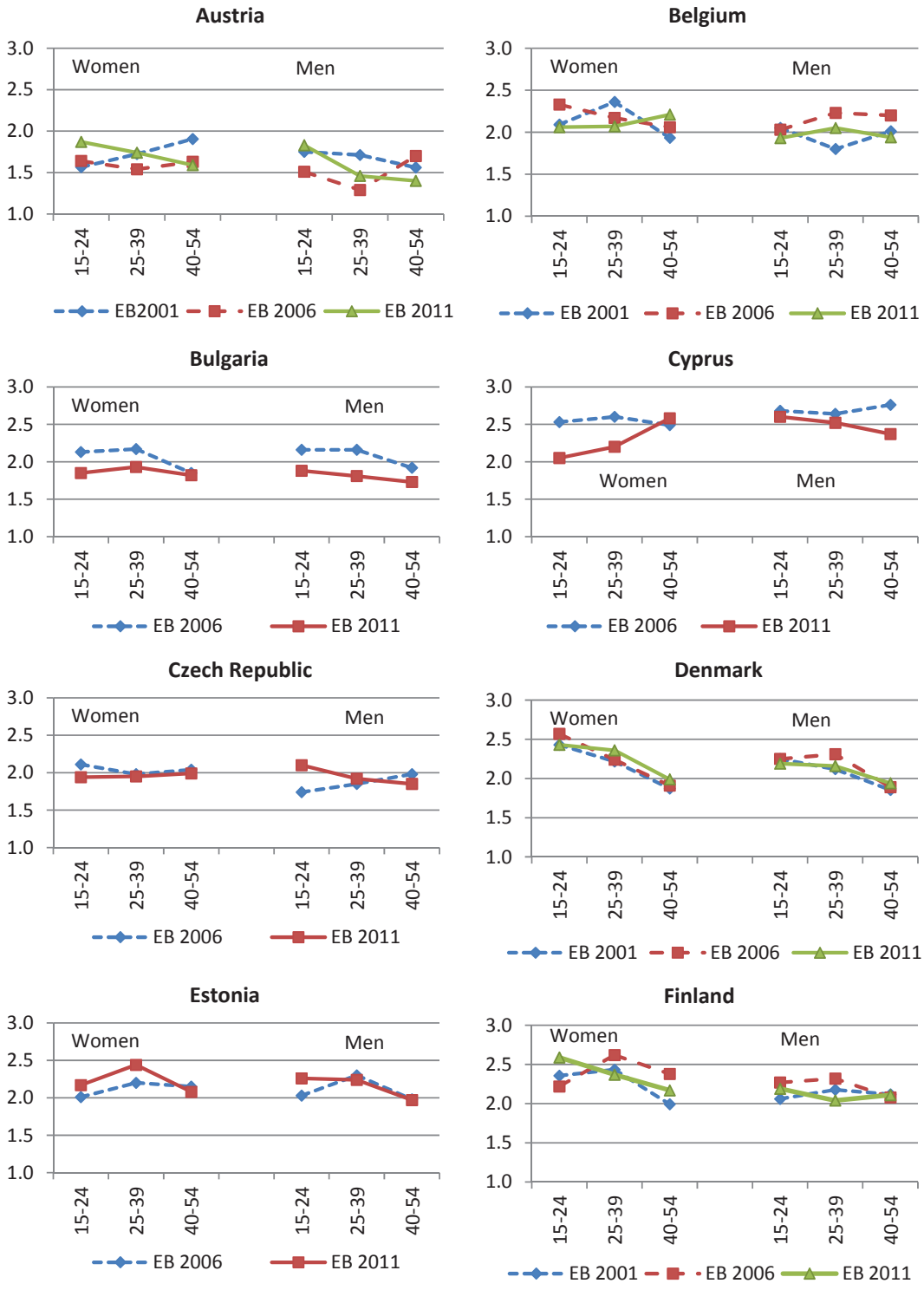


Figure A.1. (Continued)

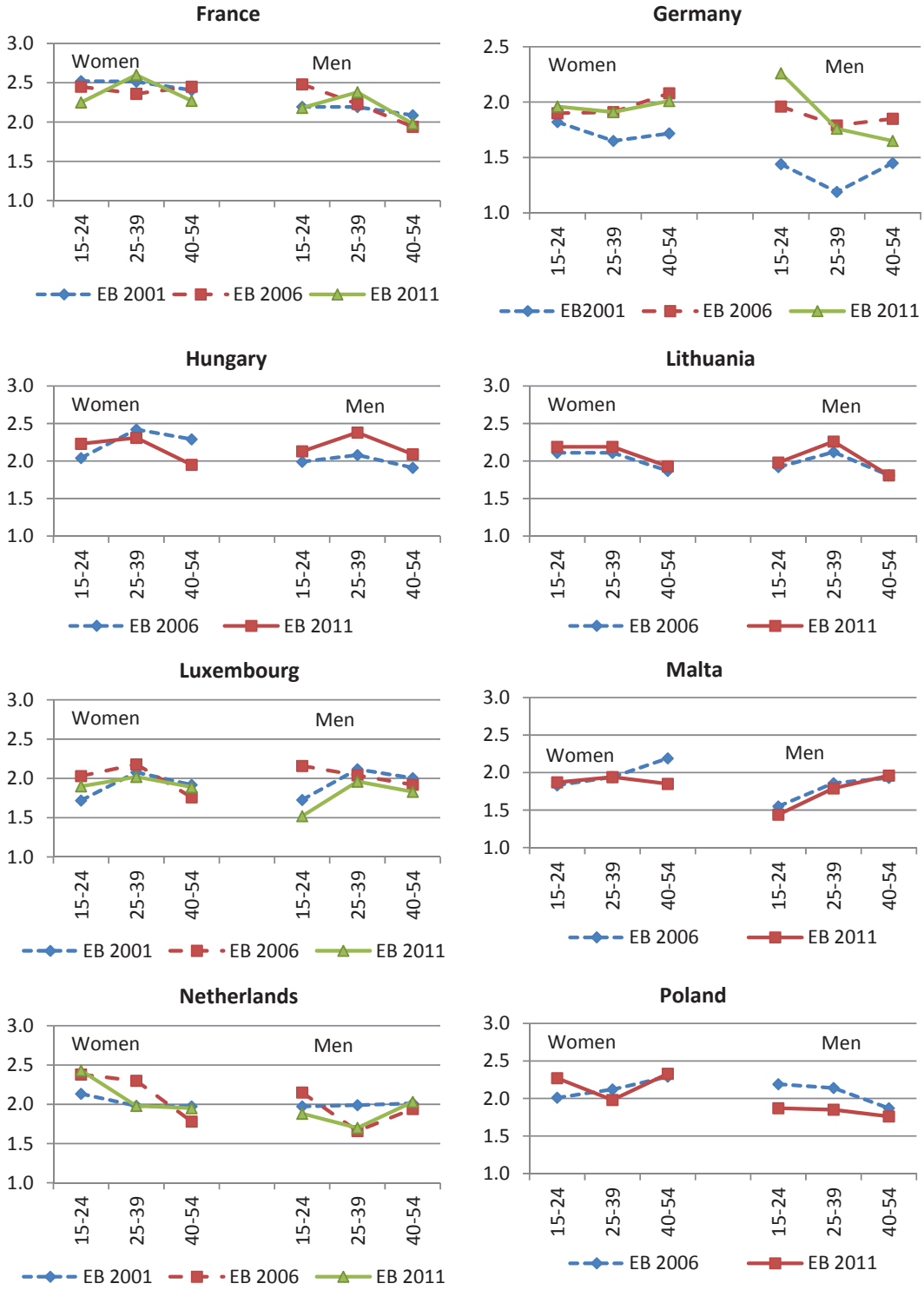


Figure A.1. (Continued)

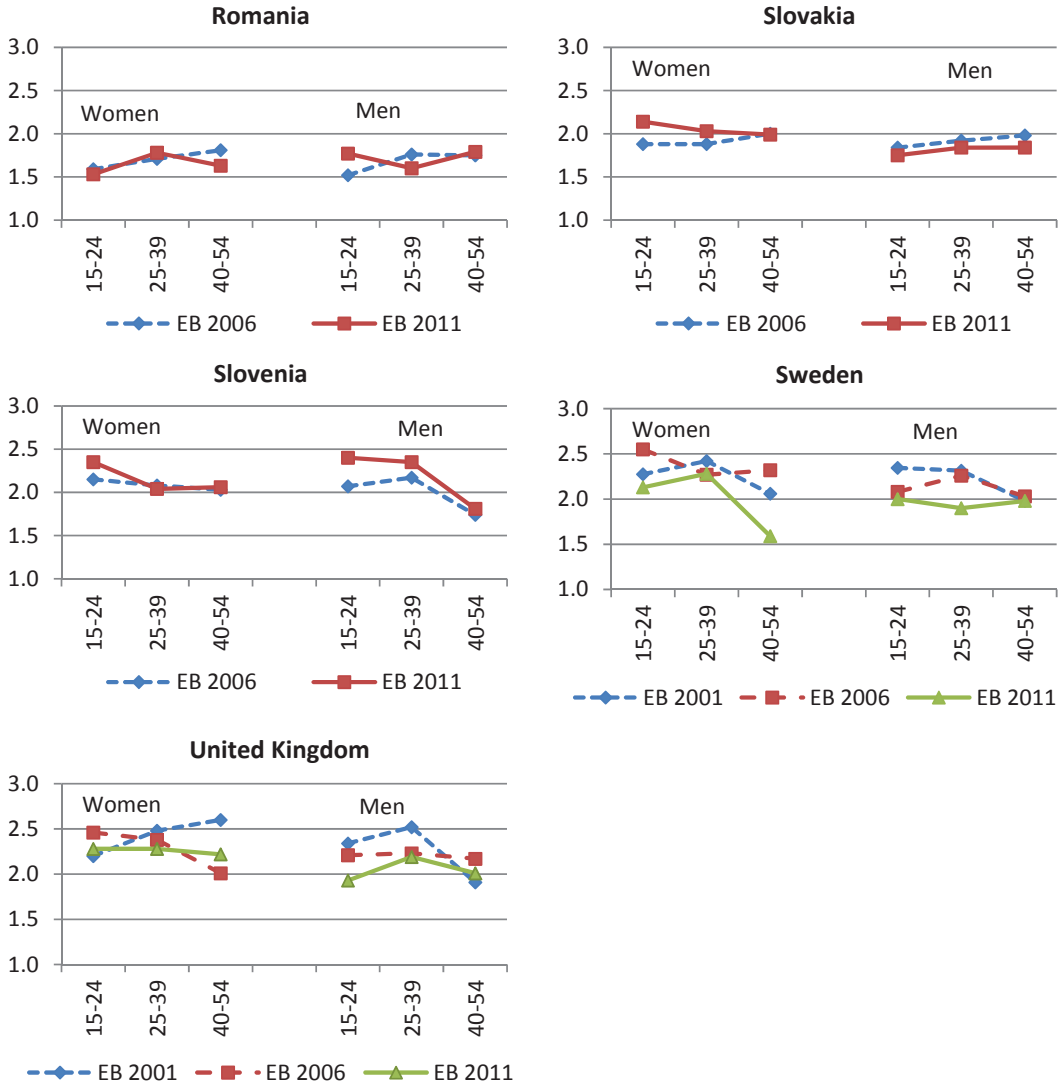


Table A.1. Random intercept ordinal regression models for a given number of additionally intended children. Intentions not weighted with uncertainty, ages 20-45, Beta coefficients.

	Childless people						People with one child					
	Model I		Model II		Model III		Model I		Model II		Model III	
Individual-level variables												
Age-33 (average)	-		-0.15	***	-0.15	***	-		-0.17	***	-0.17	***
(Age-33)^2	-		-0.01	***	-0.006	***	-		-0.008	***	-0.008	***
Female (reference)	-		0		0		-		0		**0**	
Male	-		0.16	*	0.16	*	-		0.58	***	0.58	***
Married (reference)	-		0		0		-		0		0	
Cohabiting	-		0.10		0.11		-		0.15		0.14	
Single	-		-0.10		-0.10		-		-0.33	*	-0.32	
Separated	-		-0.24		-0.24		-		-0.82	***	-0.80	***
Low education (reference)	-		0		0		-		0		0	
Medium education	-		0.07		0.08		-		0.27		0.28	
High education	-		0.26		0.28	*	-		0.81	***	0.81	***
Enrolled in education	-		0.68	***	0.68	***	-		1.38	**	1.35	**
Employed (reference)	-		0		0		-		0		0	
Unemployed	-		-0.36	***	-0.35	***	-		0.03		-0.02	
Low pos. on social scale (reference)	-		0		0		-		0		0	
High pos. on social scale	-		0.29	***	0.29	***	-		0.23	*	0.23	*
Perception of worsening in:												
- Cost of living	-		-0.08		-0.08		-		-0.13		-0.12	
- Affordability of housing	-		0.06		0.08		-		0.12		0.17	
- Economic situation	-		-0.11		-0.14		-		-0.01		-0.07	
- Employment situation	-		0.15		0.10		-		-0.06		-0.13	
- Household financial situation	-		-0.14		-0.15		-		-0.26	*	-0.24	*
- Personal job situation	-		-0.04		-0.04		-		0.09		0.07	

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Table A.1. (Continued)

	Childless people						People with one child					
	Model I		Model II		Model III		Model I		Model II		Model III	
Country-level variables Share of people reporting a worsening in:												
Cost of living in the country	-		-		-0.002		-		-		-0.64	
Affordability of housing in the country	-		-		-0.13		-		-		-0.78	
Country economic situation	-		-		-0.84		-		-		-0.11	
Country employment situation	-		-		2.36	**	-		-		1.79	
Household financial situation	-		-		0.74		-		-		-2.63	
Personal job situation	-		-		-1.34		-		-		1.61	
First cutpoint	-1.43	***	-1.11	***	-0.34		-0.10	**	-0.04		0.58	
Second cutpoint	-0.64	***	-0.10		0.67		1.77	**	2.32	***	2.95	***
Third cutpoint	1.66	***	2.49	***	3.25	***	3.85	**	4.53	***	5.16	***
Variance at the country level	0.16	***	0.12	***	0.05	***	0.15	**	0.12	***	0.06	**
Number cases	3556		3556		3556		2096		2096		2041	

* p<0.05; ** p<0.01; *** p<0.001.

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