

DEMOGRAPHIC RESEARCH

A peer-reviewed, open-access journal of population sciences

DEMOGRAPHIC RESEARCH

VOLUME 39, ARTICLE 28, PAGES 795–834

PUBLISHED 10 OCTOBER 2018

<http://www.demographic-research.org/Volumes/Vol39/28/>

DOI: 10.4054/DemRes.2018.39.28

Research Article

Economic uncertainty and first-birth intentions in Europe

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This publication is part of the Special Collection on “The New Roles of Women and Men and Implications for Families and Societies,” organized by Guest Editors Livia Sz. Oláh, Rudolf Richter, and Irena E. Kotowska.

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Economic uncertainty and first-birth intentions in Europe

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Abstract

BACKGROUND

The demographic challenge Europe is facing due to long-term low fertility, accompanied by pronounced economic uncertainty, indicates the need for adequate policy response based on a thorough understanding of the economic uncertainty–fertility decisions–public policy nexus.

OBJECTIVE

We address the relationship between societal economic conditions, individual economic uncertainty, and short-term first-birth intentions of women and men in ten European countries, representing various institutional contexts before and after the Great Recession.

METHODS

We analyse European Social Survey data from 2004 and 2011. After addressing the macro-level association, we study the micro-level relationship in regard to perceived security of employment and income situation, based on multiple logistic regression models.

RESULTS

Societal economic uncertainty is negatively associated with short-term parenthood intentions, especially for men. Regarding subjective economic security, men's labour market position matters irrespectively of the institutional context, but women's labour market position matters at younger ages only and in particular welfare regimes (the Postsocialist and Familialistic regimes). Perceived income security is less important at higher ages for either gender and for women below age 30, especially in the aftermath of the crisis. Men in their early thirties show the lowest fatherhood intentions in a constrained situation.

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CONTRIBUTION

Our findings highlight the continued importance of economic uncertainty for fertility plans, especially for men, who still seem to consider themselves as the primary earner in couples. For young employed women, a secure position is a precondition for first birth, but motherhood appears as attractive alternative to unemployment above age 30, except for Postsocialist and Universal clusters.

1. Introduction

Europe is facing a demographic challenge, as pointed out in contemporary scholarship of the welfare state, gender, economics, and demography (Oláh and Fahlén 2013). Below-replacement level period fertility rates, displayed in nearly all European countries since the 1990s or even earlier, are accompanied by declining completed cohort fertility of women (and men) born in the mid-1960s and later. In one-third of EU member states, final family size is likely to remain at or below the critical level of low fertility (Myrskylä, Goldstein, and Cheng 2013), known to accelerate population ageing, that prevails in Europe overall, with the prospect of severe consequences for economic development. Also, childlessness levels have increased and in a number of countries about one-fifth of young cohorts may end their reproductive career without becoming a parent (Tanturri et al. 2015), further enhancing concerns about future care-deficit in regards to the elderly (Daly 2012). These demographic trends have been accompanied by relatively high unemployment rates, especially for young people, and high prevalence of precarious jobs across the European Union, resulting in pronounced economic uncertainty for a not negligible part of population (Oláh, Richter, and Kotowska 2014). For adequate policy responses to this situation, a thorough understanding on the economic uncertainty-fertility decisions-public policy nexus is essential. Our study is a modest contribution to that.

Studying childbearing intentions can provide deeper insights with respect to fertility trends given quite strong association between intentions and subsequent fertility behaviour (Philipov 2009a; Schoen et al. 1999). In contrast to fertility preferences which reflect social norms (Hagewen and Morgan 2005; Livi-Bacci 2001), childbearing intentions take into account people's life situation, including economic situation and aspirations (Morgan and Rackin 2010; Philipov, Spéder, and Billari 2006). We focus on individuals in stable couple relationships, so time for partner-search can be disregarded with respect to their childbearing intentions. Short-term intentions are based on the perception of effective options related to individuals' present situation (which also includes the perception of the quality and likely stability of their partnership in shorter

run) and expectations about future prospects (Fahlén 2013; Meyers 1997; Rijken and Liefbroer 2009). Short-term intentions are therefore more closely related to the sense of risk and security than general childbearing intentions. Economic situation is important not only for overall wellbeing, but also in relation to fertility trends, as economic uncertainties can constrain men and women's childbearing plans and, in turn, their fertility (Kotowska et al. 2010; Oláh and Fraczak 2013). Alternatively, uncertain economic situation can boost childbearing intentions as a way to reduce uncertainty in life, by turning the focus to the (more certain) private sphere of the family from the (uncertain) public sphere of the labour market (Friedman, Hechter, and Kanazawa 1994; Pailhé and Solaz 2012). The issue of equality may gain importance here as both alternatives can coexist in a population, but apply to different subgroups related to gender, age, and socioeconomic status (Adserà and Menendez 2011), to name a few. First-birth intentions are of special importance as they influence the transition to parenthood as such, its timing and related to that, also the quantum of fertility (Sobotka 2003).

In our study we seek to shed more light on whether and how economic uncertainty is associated with people's ability to plan for parenthood in Europe in the early 2000s, before the Great Recession and its aftermath. We analyse women and men of childbearing ages who live in a coresidential partnership and have not yet become parents, hence are likely to consider having a first child soon or delay birth. We address economic uncertainty at two dimensions given its complex nature, both at the macro and the micro levels. For the former, we study changes in unemployment rates and in employment protection legislation (EPL), and their association with fertility intentions. For the latter we rely on measures of individuals' perceptions on insecurity, while also taking into account the partner's labour force attachment. We focus on ten countries selected to represent the full range of institutional and policy variations commonly depicted as welfare regime types (Esping-Andersen 1990; Korpi 2000; also see Hobson and Oláh 2006) in Europe to also gain better understanding about the role of the institutional context in the economic uncertainty–fertility interplay indicated in the literature (Adserà 2011).

In the next section we present our theoretical framework, followed by an overview of previous research on the links between economic uncertainty and childbearing. Thereafter, we discuss the institutional contexts analysed, focusing mainly on labour market conditions and work–family reconciliation in the selected European countries. The method and data section is followed by the results from our macro- and micro-level analyses. We end the study with a summary and brief conclusion.

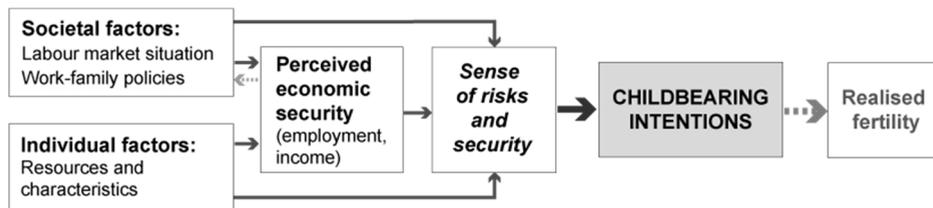
2. Theoretical framework

As pointed out in the literature, the sociopsychological theory of planned behaviour (TPB) (Ajzen 1991; Ajzen and Fishbein 2005) provides a framework well suited for analyses of short-term childbearing intentions (Ajzen and Klobas 2013; Philipov and Bernardi 2012). This framework has been increasingly utilised in demographic research addressing the role of intentions as a key issue in the behavioural decision-making process (Dommermuth, Klobas, and Lappegård 2011; Philipov 2009b; also see Billari, Philipov, and Testa 2009 for an overview of earlier studies). In the TPB intentions are seen as a motivation to act. Strong intentions increase the probability that people will realise their intentions. Intentions themselves are influenced by individual characteristics, attitudes, and norms, and perceived behavioural control, suggesting that not only available means and resources, but also a person's subjective ability to act, based on perceived obstacles and constraints, matter (Ajzen 1991; Ajzen and Fishbein 2005). In this paper we combine the TPB (reflecting the micro level) with an institutional approach (the macro perspective) taking into account variations in societal economic uncertainty and work–family reconciliation policies in different contexts. We seek to deepen the understanding of the interplay between individual life situations and institutional factors that shape people's perceived behavioural control, which in turn can affect their sense of risk and security regarding their present situation and future prospects.

Our theoretical framework (see Figure 1) implies that societal factors (labour market situation and work–family reconciliation policies), individual factors (personal characteristics and resources), and perceived economic security (job security and income security) which is a joint outcome of the macro- and microeconomic situation, together influence people's sense of risk and security. Based on them, childbearing intentions are formed, and births will be realised or postponed further (perhaps foregone). Societal factors can either strengthen or weaken people's capabilities to be both earners and carers, which affects their perceptions of uncertainty, the latter also being influenced by individual characteristics. The joint result is the apprehension of security or lack of it, based on which intentions to become a parent within a few years or not, are formed. For example, high unemployment levels in a society would result in lower perceived economic security and reduced birth intentions in general. For vulnerable groups, such as young people and the less educated, short-term first childbearing plans may become even weaker under the circumstances, alternatively such plans become stronger for them considering parenthood as a way to reduce uncertainty in life. Gender-specific expectations, related to economic provision seen as imperative for men, and care provision being strongly related to the female gender role, may also result in differences in perceived economic security and thus birth intentions

of men and women in a strained macroeconomic situation, socioeconomic characteristics notwithstanding. The institutional context at hand (perceived via expectations regarding employment, measures of work–family reconciliation, and the social protection offered at economic hardship) would shape the leeway for individuals in their specific macro- and microeconomic situation, hence matter for their perceived economic security and, in turn, fertility plans. Thus, short-term first childbearing intentions are shaped by people’s sense of risk and security, which is influenced by societal factors, individual factors, and perceived economic security (see also Fahlén 2013; Fahlén and Oláh 2013). Relying on this theoretical framework we study men and women’s capabilities to become parents in contemporary Europe, as reflected in their short-term first-birth intentions, taking into account variations in the institutional context.

Figure 1: Theoretical framework for understanding mechanisms related to short-term childbearing intentions



3. Previous research on economic uncertainty and childbearing

The idea that economic security, in terms of employment and income, is a precondition for having children is deeply embedded in theories on fertility decisions (Balbo, Billari, and Mills 2013; Brewster and Rindfuss 2000; Hobcraft and Kiernan 1995). The relationship between labour market participation, especially that of women, and fertility is, however, complex and the empirical evidence is inconclusive (Kreyenfeld 2010; Matysiak and Vignoli 2010), partly due to the use of different measures and methods. The need for more systematic research on economic recessions and fertility has also been pointed out (Sobotka, Skirbekk, and Philipov 2011), notwithstanding that the negative impact on fertility of high unemployment rates, that accompany economic downturns, has been a consistent finding in recent literature in Europe (see Adserà 2005, 2011; Comolli 2017; Goldstein et al. 2013; Gutiérrez-Domènech 2008; Hoem 2000; Hondroyannis 2010; Kohler and Kohler 2002; Kravdal 2002, Lanzieri 2013;

Matysiak, Sobotka, and Vignoli 2018), the United States (see Schneider 2015; and Comolli 2017 also for overview of relevant studies) and Latin America (Adserà and Menendez 2011). Most studies, however, rely on data that does not cover the Great Recession or its aftermath (unlike Comolli 2017; Schneider 2015). Employment protection legislation (EPL) has been suggested to be relevant for trends in unemployment, but the association is unclear (Nickell, Nunziata, and Ochel 2005; Skedinger 2010), and possibly varies by gender and age groups (Bertola, Blau, and Kahn 2007; Kugler and Pica 2003, Vos 2009). Research on the link between EPL and childbearing intentions is relatively limited and the findings are inconclusive, as both negative (Adserà 2004) and positive fertility effects (Bratti, Del Bono, and Vuri 2005; Prifti and Vuri 2013) have been shown for stricter EPL.

With respect to microlevel uncertainties and their impact on fertility, previous studies have relied mainly on objective measures of uncertainty, such as income and employment status, while perceived insecurity has been more rarely addressed. The findings for income-effects, frequently investigated, are inconclusive. Ranjan (1999) found that uncertainty about future income can lead to the postponement of births, and men's income was seen to be positively associated with the transition to fatherhood in Germany (Schmitt 2012). However, the findings are more ambiguous for women's income as a positive association with first motherhood was shown in Sweden, Denmark, and Finland (Andersson 2000; Andersson, Kreyenfeld, and Mika 2014, Vikat 2004), but not in West Germany (Andersson, Kreyenfeld, and Mika 2014), Norway (Kravdal 2002), or Italy (Santarelli 2011; Vignoli, Drefahl, and De Santis 2012). Results about the effect of being unemployed are also mixed. Male unemployment seems to delay fatherhood entry in France (Pailhé and Solaz 2012) and Norway (Kravdal 2002), but to increase first-birth propensity among medium- and low-educated men in the United Kingdom and low-educated men in Germany (Schmitt 2012) or being unrelated to first birth in Germany (Özcan, Mayer, and Luedicke 2010). Women's unemployment and first motherhood was found to be positively associated in Sweden (Hoem 2000), Norway (Kravdal 2002), Russia (Kohler and Kohler 2002), East Germany (Özcan, Mayer and Luedicke 2010), and for women with less than tertiary education in Germany and the United Kingdom (Schmitt 2012). Other studies show no clear effect for women in West Germany (Özcan, Mayer, and Luedicke 2010) and for less educated women in Germany, but unemployed highly educated women seem to postpone motherhood there (Kreyenfeld 2005, 2010). Permanent employment for both partners in a couple is associated with higher fertility compared to those with less stable employment in Italy (Santarelli 2011; Vignoli, Drefahl, and De Santis 2012). Also, in Spain women who hold fixed-term contracts delay entry into motherhood (De la Rica and Iza 2005), as they do in Sweden (Lundström and Andersson 2012) and in Germany, but not in the United Kingdom (Schmitt 2012).

As for perception of insecurity, Kreyenfeld (2005; 2010) finds no clear indication of economic uncertainty leading to a postponement of parenthood in Germany, but highly educated women tend to delay first birth if they perceive their economic situation as insecure. Insecure employment delays this transition for women in France as well (Pailhé and Solaz 2012), but not in Russia (Kohler and Kohler 2012). In addition, previous research suggests that economic uncertainty affects women and men's fertility differently (Kreyenfeld 2005; Pailhé and Solaz 2012; Schmitt 2012; Tölke and Diewald 2003). With respect to childbearing intentions compared to actual fertility, the association with economic uncertainty has received somewhat less attention in the literature on Europe until quite recently (Hofmann and Hohmeyer 2013, but see the special collections by Kreyenfeld, Andersson, and Pailhé 2012; Oláh and Fraczak 2013, among others). Berninger, Weiß, and Wagner (2011) find a direct effect of income and an indirect effect of job security satisfaction on men's childbearing intentions for West Germany, whereas for women no direct and only a weak indirect impact of precarious work could be observed. In a comparative study Fahlén (2013) shows that perceived economic uncertainty is negatively associated with women's first-birth intentions across ten European countries, especially among the less educated in countries with weaker work–family reconciliation policies. The importance of the institutional setting with respect to the relationship between uncertainty and fertility decisions has been noted in other studies as well (see Adserà 2005; Kreyenfeld, Andersson, and Pailhé 2012; Oláh and Fraczak 2013; Özcan, Mayer, and Luedicke 2010; Schmitt 2012).

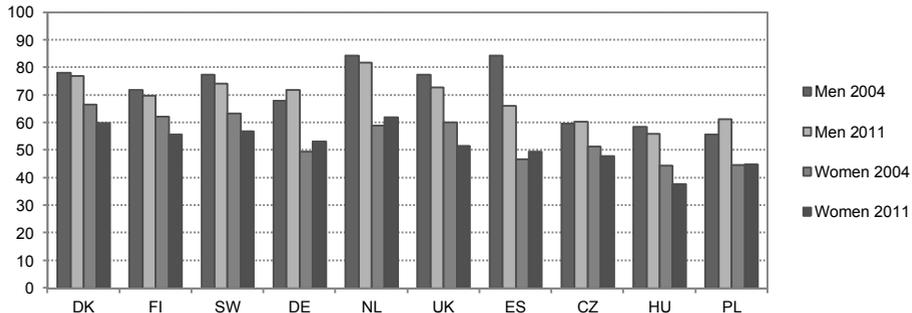
Based on this overview, the first contribution of the present study concerns the literature on the mechanisms of societal-level uncertainties and fertility. We address the interplay between short-term first-birth intentions on the one hand, and macroeconomic uncertainties of the Great Recession on the other hand, the latter measured via changes in societal-level unemployment and EPL, and not yet much studied. The second contribution is that the association between first childbearing intentions and economic uncertainties is addressed also at the micro level, by focusing on both women and men, in relation to the Great Recession and its aftermath in a cross-country comparison. Such focus with respect to larger number of countries is relatively rare. Our micro-level analyses rely on measures of individual apprehension of economic uncertainty while taking into account the partner's labour force attachment to gain a more comprehensive picture on the couple's perceived economic situation. In these analyses of individual economic uncertainties we also include a measure of welfare state clusters, accounting for institutional and policy variations present in contemporary Europe. These settings are likely to shape individuals' perceptions of their economic situation being insecure or not, and whether this perception is associated with the intention to become a parent in the near future. Next we discuss the main features of the contexts studied in this paper.

4. Institutional contexts: Labour market conditions and work–family reconciliation

4.1 Labour market conditions

Labour market arrangements have become important aspects for fertility decisions across Europe in the early 21st century (Adserà 2011). Focusing on employment rates in 2004 and 2011 for men and women in the main childrearing ages in the ten countries we analyse (Figure 2), we see a decrease for men with the exception of Germany, the Czech Republic, and Poland. Among women, the rates decreased in all countries but Germany, the Netherlands, Spain, and Poland. For the year 2004, the largest gender employment gap is seen for Germany, the Netherlands, the United Kingdom, and Spain. By 2011 it has diminished for Spain due to a substantial drop in male employment rates and a slight increase in women's rates. Thus the macroeconomic situation seems to have deteriorated in varying extent across countries between the years prior to the recession and the aftermath.

Figure 2: Employment rates for men and women in the main childrearing ages (25–49 years), 2004 and 2011



Source: Eurostat (2013a).

However, employment rates per se may be less informative when it comes to macro-level economic uncertainty. Unemployment is probably of greater importance as it can influence childbearing intentions not only for those directly affected by it, but also for employed people, strengthening perception of uncertainty in the society (Kravdal 2002). Such uncertainty, related to arbitrary dismissal among others, may be reduced via the EPL, being indirectly associated with birth plans, affecting the sense of risks and future prospects (Allard 2005). In this study we address these macro-level

measures in diverse institutional settings, to enhance our knowledge on the mechanism around economic uncertainty and parenthood intentions.

4.2 Work–family reconciliation

The substantial differences in fertility levels across Europe have been attributed to variations in especially women’s capabilities to combine employment with having a family (OECD 2011a). How the paid work-care nexus is institutionalised, as seen in social policy (e.g., Korpi, Ferrarini, and Englund 2013; Lewis 2009) and labour market arrangements (Blossfeld et al. 2005; Esping-Andersen 1999), varies greatly across countries. In this paper we focus on ten countries that represent the full scale of such variations in Europe, distinguishing among five welfare regime types.

Denmark, Finland, and Sweden represent the Universal model, with generous institutional support for work–family reconciliation (Gornick and Meyers 2005) and high levels of public childcare provision, heavily subsidised (Plantenga and Remery 2009). The Conservative model provides relatively modest institutional support for maternal employment (Gornick and Meyers 2005), as seen in Germany and the Netherlands. Access to formal childcare, especially on full-time basis and for children below age three, is limited (Plantenga and Remery 2009), and the cost of childcare increased in the first decade of the 21st century (OECD 2011b, 2013a). The Liberal model, represented here by the United Kingdom, is characterised by limited state support to combine employment and parenthood (Gornick and Meyers 2005), resulting in comparatively low employment rates for mothers of preschoolers (OECD 2012), and relatively low proportion of young children in formal childcare (Plantenga and Remery 2009). Spain represents the Familialistic model in our analysis, with strong familism and weak institutional support for working mothers (Ferrera 1996). The fairly low enrolment rates of young children in the rather expensive formal childcare (OECD 2011b, 2013a; Plantenga and Remery 2009) are paralleled by low employment rates for mothers of preschoolers (OECD 2012). Finally, the Postsocialist model, represented by the Czech Republic, Hungary, and Poland, is characterised by an institutional setting that promotes the dual-earner family while preserving the gendered division of labour in the home (Ferrarini 2006; Hobson and Oláh 2006). The latter is reinforced by long and quite generous maternal/parental leave but limited public childcare provision (Saxonberg and Sirovátka 2006). Next we discuss the data and methods used in our analyses.

5. Methods and data

The empirical analysis is based on data extracted from the European Social Survey (ESS), waves 2004/2005 and 2010/2011, which are the only ones that include information on short-term childbearing intentions and perceived job security around the years of the Great Recession. Although the ESS has been conducted in more than 20 countries, the information of interest for us would be available only for 17 countries, and not for all of them in both waves, with a substantial overrepresentation of postsocialist countries. We have therefore opted to include three countries of the latter group in our analyses, namely the ones that joined the European Union earliest among them, and to focus on ten countries altogether. The ESS sample is representative of all persons 15 years and older in each country. We analyse a subsample of a total of 2,174 respondents from the ten countries³ studied here, women aged 20–45, and men aged 25–49 living with a partner but without children in the household (1,165 childless women and 1,009 childless men). The reason of using different age-ranges for women and men is that women are younger when they have their first child than men, which means that intentions to become a parent are also formed at younger ages for them. On the other hand, childbearing above age 45 is extremely rare among women, which explains the upper limit of their age-range.

Weights are used to correct for differences in the sample design and population size (see Ganninger 2007). In our analyses first we address the macro-level association between measures of economic uncertainty and aggregated first childbearing intentions in 2004 and 2011 across the selected countries. Thereafter we focus on the micro-level relationships, based on multiple logistic regression models. We have chosen to use this method rather than to rely on multilevel models as analytical tool because we analyse a limited number of countries (i.e., ten) grouped into five welfare regime clusters. A sensitivity test, running separate analyses by regime types, showed no significant differences between countries within each welfare regime cluster and did not improve the respective models. Hence, including the variable regime types into the analyses to control for differences across institutional contexts is feasible. Below we present the variables included in the analyses.

Our dependent variable, short-term first childbearing intention, is based on the question: “Do you plan to have a child within the next three years?” Response alternatives are: definitely not, probably not, probably yes, and definitely yes, which we have recoded to create a dichotomous variable with ‘probably yes’ and ‘definitely yes’ in one category and the two other response alternatives in the other. Don’t know and

³ The number of respondents per country are: DK=158 (women: 82; men: 76); FI=238 (w: 150; m: 88); SW=234 (w: 130; m: 104); DE=297 (w: 160; m:137); NL=267 (w: 139; m: 128); UK=238 (w: 115; m: 123); ES=251 (w: 130; m: 121); CZ=222 (w: 112; m: 110); HU=118 (w: 66; m: 52); PL=151 (w: 81; m: 70).

missing responses were also included in the latter category, to maximize the size of the working sample. This information has also been used for measuring aggregate childbearing intentions, based on the country- and gender-specific proportions of respondents who intend to have a first child in the near future, for the macro-level analyses. The difference between the proportions for 2004 and 2011 has been calculated to capture the changes between these two points in time, separately by country and gender.

In the macro-level analyses, we rely on indicators most relevant for economic uncertainty in relation to childbearing decisions as discussed above: unemployment rates and strictness of EPL (see Table 1). As we want to capture the societal economic ‘climate’ affecting the sense of uncertainty, and whether and how it has changed from the before-crisis period to the aftermath of the crisis, we use information on overall unemployment provided by Eurostat for ages 15–64 years, instead of a more limited age-range or gender-specific unemployment rates for 2004 and 2011. The difference between the rates in the two years is calculated to capture changes in unemployment.⁴ Our second measure is based on the OECD index scores of the strictness of EPL that includes two indices (see OECD 2013b and Venn 2009 for index construction): the EPL for individual and collective dismissals and the EPL for temporary employment. These two EPL-indices are summed and divided by two for 2004 and 2011 respectively, and the difference between the values for these years is calculated to capture changes in employment protection.⁵

Regarding the micro-level analyses, the main variables of interest refer to subjective economic uncertainty, operationalised as perceived job security and perceived income security, based on self-evaluations of a respondent’s employment situation and economic resources. Perceived job security is based on the statement “My job is secure,” referring to an actual or implied promise of continued employment. The responses ‘not at all true’/‘a little true’ are regarded as expressions of feeling insecure whereas ‘quite true’/‘very true’ suggest feeling secure about one’s job. In order to avoid a reduction of the subsample, as the statement was presented only to employed respondents, we added two further categories to the perceived job security variable: unemployed (i.e., respondents not in paid work during the week of the survey) and others (i.e., self-employed and those in unspecified activities, as well as missing responses). Perceived income security, which is our second measure of subjective economic uncertainty, refers to the household income. Responses ‘finding it difficult’/‘very difficult to live on present income’ suggest a constrained economic situation; ‘living comfortably on present income’ indicates comfortable economic situation, and ‘coping on present income’ is considered as manageable economic

⁴ That is: Change = Unemployment rate 2011 – Unemployment rate 2004.

⁵ That is: Change = ((Index1 for 2011+Index2 for 2011) /2) – ((Index1 for 2004+Index2 for 2004) /2).

situation. The latter category includes also the few missing responses. Via the welfare regime variable we account for contextual differences (i.e., societal factors, see Figure 1), discussed in section 4, in the regression model. The Universal welfare regime includes Denmark, Finland, and Sweden, the Conservative regime includes Germany and the Netherlands, the Liberal regime includes the United Kingdom, the Familialistic regime includes Spain, and the Postsocialist regime includes the Czech Republic, Hungary, and Poland. Individual resources and characteristics (see Figure 1) are accounted for in the analysis by the following factors: respondent's age (in the range of 20–45 years for women and 25–49 years for men),⁶ respondent's educational attainment (the few missing responses, not shown in the tables, are included in the analysis as a separate category), and the co-resident partner's labour force attachment (see Table 2).⁷

Table 1: Unemployment rates, strictness of employment protection legislation (EPL), and changes between 2004 and 2011

	Unemployment rates (15–64 years)			Strictness of EPL (individual, collective dismissals i.e., Index 1)			(temporary employment i.e., Index 2)		
	2004	2011	Change	2004	2011	2004	2011	Change	
DK	5.3	7.7	2.4	2.56	2.39	1.38	1.38	–0.08	
FI	10.4	7.9	–2.5	2.08	2.01	1.56	1.56	–0.04	
SW	6.8	8.0	1.2	2.58	2.58	1.44	0.81	–0.31	
DE	10.8	6.0	–4.8	3.09	3.09	1.00	1.00	0.00	
NL	4.7	4.4	–0.3	2.92	2.87	0.94	0.94	–0.02	
UK	4.6	8.2	3.6	1.68	1.68	0.38	0.38	0.00	
ES	11.1	21.8	10.7	2.76	2.65	3.25	2.56	–0.39	
CZ	8.3	6.8	–1.5	2.97	2.79	0.50	1.31	0.32	
HU	5.9	11.0	5.1	2.40	2.40	1.13	1.13	0.00	
PL	19.4	9.8	–9.6	2.41	2.41	1.75	1.75	0.00	

Note: Higher EPL value denotes stronger employment protection legislation.
Sources: Eurostat (2013b), OECD (2013b).

⁶ Respondents with missing information about their age were neither included in descriptive statistics table, nor in the analyses.

⁷ The few respondents with missing information on this aspect were not included in the analyses, or in the descriptive table.

Table 2: Descriptive statistics of the sample by gender and survey year (weighted by population and design)

	Women		Men	
	2004	2011	2004	2011
Plan to have a child within 3 years				
Definitely yes/Probably yes	53.5	57.1	59.2	51.3
Perceived job security				
Job is very secure	45.5	39.6	51.9	50.6
Job not very secure	24.6	25.7	21.5	20.0
Unemployed	18.6	20.9	7.3	9.4
Others	11.3	13.8	19.3	20.0
Perceived income security				
Comfortable economic situation	44.7	38.8	43.6	42.3
Manageable economic situation	43.5	43.8	41.4	43.9
Constrained economic situation	11.8	17.4	15.0	13.8
Age				
20–24 years	18.1	19.3		
25–29 years	35.7	33.4	24.7	25.5
30–35 years	26.2	25.6	37.2	33.1
36–45 years	20.0	21.7		
36–40 years			19.4	17.4
41–49 years			18.7	24.0
Educational attainment				
Lower secondary level or less	15.3	15.9	19.4	15.4
Upper secondary/vocational	48.5	46.2	45.5	45.8
Tertiary level	36.2	37.4	33.4	38.5
Partner's labour force attachment				
Paid work	85.1	86.0	80.0	78.9
Not in paid work	14.9	14.0	20.0	21.1
Welfare regime				
Universal (DK/FI/SW)	9.0	7.2	7.7	6.2
Conservative (DE/NK)	37.0	36.5	32.4	37.1
Liberal (UK)	23.6	18.6	24.9	23.5
Familialistic (ES)	15.5	21.1	21.0	17.8
Postsocialist (CZ/HU/PL)	14.9	16.6	14.0	15.4
Total N	579	586	498	511
Weighted N	674	750	592	671

Note: Statistically significant differences (based on Chi2-test) in the distributions between the two survey years are shown in bold.

6. Results

In this section we first present the results of the aggregate analyses on the association between changes in societal-level economic uncertainty, and the difference in country-specific childbearing intentions in 2004 and 2011. Thereafter, we present the results of individual-level logistic regression analyses with separate models by gender and age group.

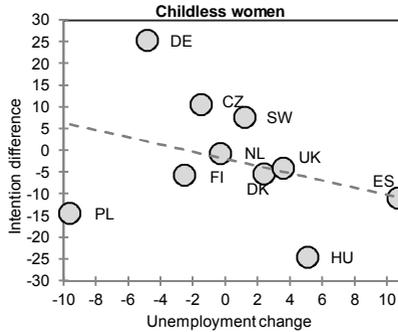
6.1 Macro-level analyses

To capture the potential impact of changes in societal economic uncertainty on short-term childbearing intentions from the before-crisis years to the aftermath of the crisis, we explore the interrelation between changes in unemployment rates and strictness of EPL, respectively, and differences in aggregate first childbearing intentions. Considering changes in unemployment we find a negative gradient (Figure 3), that is a decrease in first childbearing intentions among both women and men in countries where unemployment rates increased.⁸ This finding is in line with previous studies (see Adserà 2005; Comolli 2017; Hondroyiannis 2010; Matysiak, Sobotka, and Vignoli 2018). The association is stronger for men than for women, possibly because men are still considered to be the main provider in the household, making his unemployment more of a hindrance for the first birth than her unemployment (Sobotka, Skirbekk, and Philipov 2011).

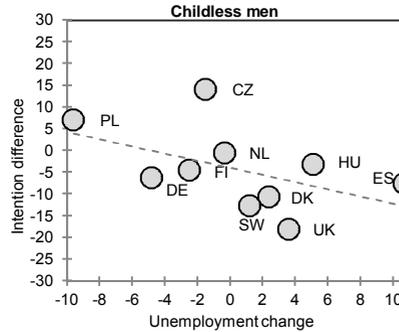
In regard to changes between 2004 and 2011, we find that employment protection matters especially for men's first childbearing intentions, related to their provider role (Figure 4). The relationship is similar, but much weaker for women. In any case, short-term intentions for entering parenthood has increased in countries where the employment protection legislation has been strengthened between the period before the crisis to 2011, as expected (see Hofmann and Hohmeyer 2013). Thus our macro-level analyses suggest a negative association between increasing societal economic uncertainty as seen in higher unemployment rates and a worsening in employment protection, and short-term first-birth intentions across Europe, especially among men.

⁸ We have also performed the macro-level analyses using female and male unemployment rates (ages 15–64 years) instead of overall unemployment. The associations are similar to those seen in Figure 3.

Figure 3: Intention difference for childless women and men, and change in unemployment rates

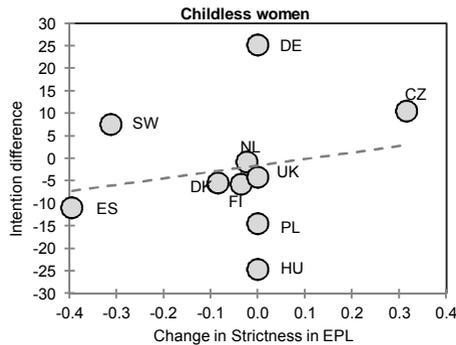


Correlation: -0.33

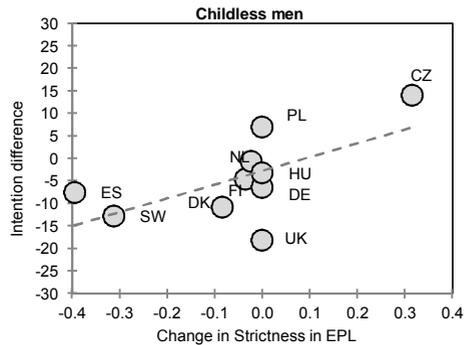


Correlation: -0.49

Figure 4: Intention difference for childless women and men, and change in strictness of EPL



Correlation: 0.20



Correlation: 0.62

6.2 Micro-level analyses

In this section we address the relationship between perceived job and income security on the one hand, and short-term first childbearing intentions on the other. We present separate models for women and men by selected age groups to account for possible interactions between age and other variables. The tables also present interactions

between the main variables of interest (the survey year, perceived employment security, and perceived income security). Only interactions that significantly improve the model fit are shown.

6.2.1 Economic uncertainty and short-term intentions of entering motherhood

Table 3 shows the results of the regression analysis with separate models for age groups 20–29 and 30–45 years, as previous research indicates more pronounced negative association between economic uncertainty and fertility for women below age 30 than for older ages (see e.g., Oláh and Fratzczak 2013; and Comolli 2017 for an overview of relevant studies). We find several significant interactions between our main variables of interest (see Models 2 and 4), discussed in the next section. As for individual characteristics, the gradients are in the expected direction. We see that the youngest (20–24) and oldest (36–45) age groups are least keen to consider entering motherhood in the near future (Models 1–4). Educational attainment is not associated with short-term childbearing intentions for women below age 30 (Models 1–2), whereas in the older age group, the less educated are the least motivated and the tertiary educated are the most prone to plan for motherhood within the next three years (Models 3–4). Living with a partner who is not employed decreases motivations to plan the first birth within short for the older age group only (see Models 3–4).

Table 3: Logistic regression of childbearing intentions of childless women, age groups 20–29 and 30–45 years (coefficients)

	Women 20–29 years		Women 30–45 years	
	Model 1	Model 2	Model 3	Model 4
Survey year				
Year 2004	ref.	ref.	ref.	ref.
Year 2011	0.00	0.68	0.53 **	0.22
Perceived employment security				
Secure job	ref.	ref.	ref.	ref.
Insecure job	-1.02 ***	-2.94 ***	-0.04	-1.21 (*)
Unemployed	-0.03	2.33 **	0.43	2.03 *
Other	-0.62 *	-0.63	0.31	-0.30
Perceived income security				
Manageable economic situation	ref.	ref.	ref.	ref.
Comfortable economic situation	-0.25	0.50	0.03	0.30
Constrained economic situation	-0.68 **	-1.23 *	-0.69 *	-1.22 *

Table 3: (Continued)

	Women 20–29 years		Women 30–45 years	
	Model 1	Model 2	Model 3	Model 4
Age				
20–24	ref.	ref.		
25–29	1.08 ***	1.23 ***		
30–35			ref.	ref.
36–45			-2.04 ***	-2.14 ***
Educational attainment				
Lower secondary level or less	0.06	0.05	-1.11 ***	-1.09 ***
Upper secondary level	ref.	ref.	ref.	ref.
Tertiary education	-0.16	-0.21	0.44 *	0.45 *
Partner's labour force attachment				
Partner in paid work	ref.	ref.	ref.	ref.
Partner not in paid work	-0.31	-0.37	-1.34 ***	-1.41 ***
Welfare regime				
Liberal	ref.	ref.	ref.	ref.
Universal	0.43	0.23	-0.05	-0.17
Conservative	-0.02	-0.51	-0.17	-1.05 *
Familialistic	0.84 **	2.63 *	0.69 *	0.76
Postsocialist	0.91 ***	1.83 **	-0.22	0.53
2011*Welfare regime				
2011*Universal		-0.49		0.39
2011*Conservative		0.21		1.21 *
2011*Familialistic		-1.61 *		-0.33
2011*Postsocialist		-1.71 **		-0.03
2011*Perceived income security				
2011*Comfortable economic situation		-0.85 *		-0.54
2011*Constrained economic situation		0.74		1.07
Welfare regime *Perceived employment security				
Universal*Insecure job		3.05 **		1.22
Conservative*Insecure job		1.76 *		1.57 *
Familialistic*Insecure job		0.93		1.36 (*)
Postsocialist*Insecure job		2.45 **		0.76
Universal*Unemployed		-2.60 *		-2.63
Conservative*Unemployed		-2.52 **		-1.38
Familialistic*Unemployed		-3.92 ***		-1.61
Postsocialist*Unemployed		-2.53 **		-3.31 *

Table 3: (Continued)

	Women 20–29 years		Women 30–45 years	
	Model 1	Model 2	Model 3	Model 4
Welfare regime *Perceived income security				
Universal*Comfortable economic situation		0.27		
Conservative*Comfortable economic situation		1.01 (*)		
Familialistic*Comfortable economic situation		-1.12		
Postsocialist*Comfortable economic situation		-0.49		
Universal*Constrained economic situation		1.41		
Conservative*Constrained economic situation		0.54		
Familialistic*Constrained economic situation		1.28		
Postsocialist*Constrained economic situation		0.03		
Constant	0.08	-0.44	0.62	0.83
Nagelkerke R Square	0.17	0.30	0.38	0.44
-2 LLR	102.66 ***	190.27 ***	226.53 ***	268.59 ***
Df	15	41	14	32

Note: ***p ≤0.001; **p ≤0.01; *p ≤0.05; (*)p ≤0.10.

6.2.2 Motherhood intentions across welfare regimes

We have calculated probabilities⁹ for childless women’s short-term birth intentions, taking into account significant interactions indicated above (Table 3, Models 2 and 4). We see that the association with perceived job security varies across welfare regime clusters by survey year and age group. Figure 5 illustrates these interactions for women aged 25–29 and 30–35 years,¹⁰ who are most likely to plan to become mothers in the near future (see Table 3). In all figures hereafter, lines are used to highlight the difference for the same category between the years 2004 and 2011, but not to imply a continuous change over the period as data is available only for these specific years.

For women aged 25–29 (Figure 5, upper row), we observe a diverse pattern across welfare regime types. In the Postsocialist and the Familialistic regimes, the intention probabilities are lower in the crisis period than in 2004, suggesting that young women’s short-term first-birth intentions in these regimes are more affected by the greater societal economic uncertainties induced by the economic crisis, unlike in the Liberal, the Universal and the Conservative regime types. In all welfare clusters, except for the

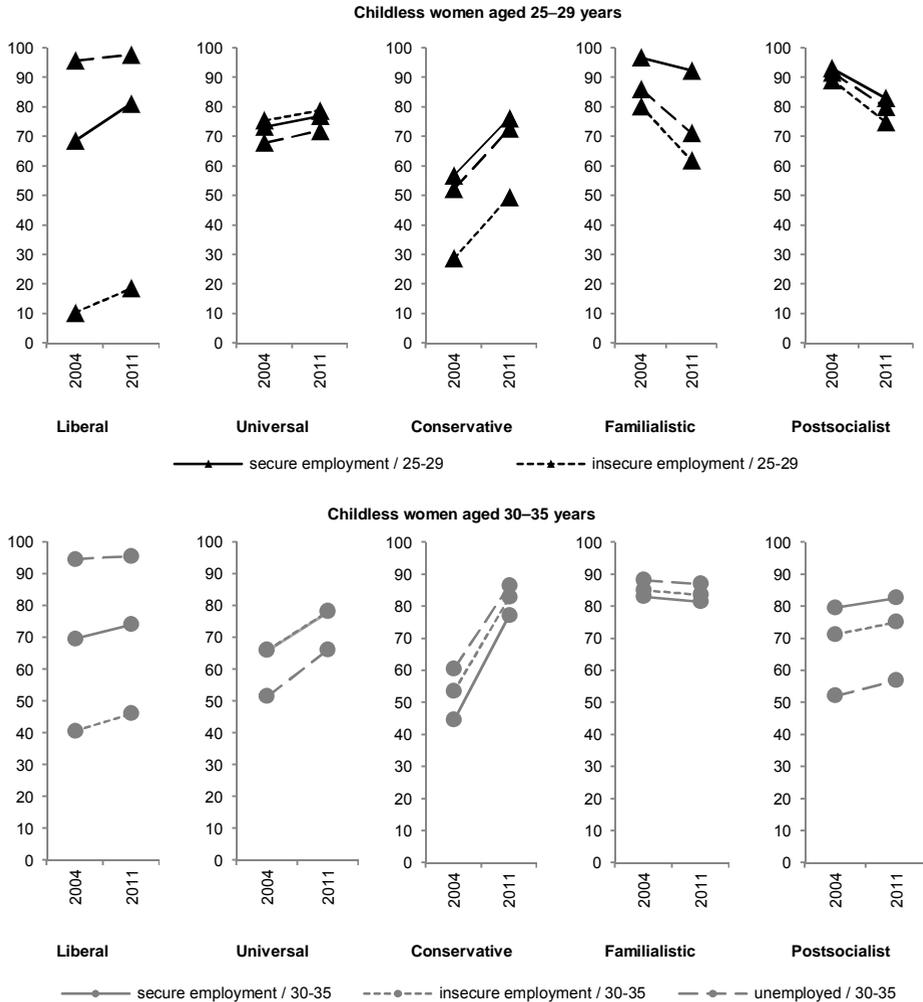
⁹ The following formula is used to calculate probabilities from the coefficients in the logistic regression: $P = \frac{\exp(a + b(\text{var}1) + b(\text{var}2) + b(\text{var}3) + \dots)}{1 + \exp(a + b(\text{var}1) + b(\text{var}2) + b(\text{var}3) + \dots)}$, where a denotes the constant and b the coefficient value.

¹⁰ The calculations also adjust for perceived income security, education, and partner’s labour-force attachment. These variables are set at baseline (see Table 3).

Universal regime type, women in their late twenties who feel insecure about their job display lower intention probabilities compared to those with secure job, indicating that subjective employment security matters for young women's childbearing plans. Unemployment appears to matter less than having insecure employment. In fact, in the Liberal regime, intention probabilities for unemployed women are above that of women who perceive their job as secure. The latter pattern applies also to women in their early thirties, and is in line with the literature (Schmitt 2012).

For women aged 30–35 (Figure 5, lower row), societal economic uncertainty seems to be less important, indicated by higher intention probabilities in 2011 than in 2004, regardless perceived employment situation, except for the Familialistic regime with little difference in intentions for the two years. Nevertheless, in the Liberal and the Postsocialist clusters, those who perceive their job as insecure are less likely to plan to become mothers in the near future, than are those who perceive their job as secure. In the Conservative and Familialistic regime types, women feeling insecure about their job have slightly higher motherhood intention probabilities than those with perceived secure employment both before the crisis and in 2011. The effect of unemployment also varies across welfare clusters, from positive or no relationship with first-birth intention in the Liberal regime and the Conservative cluster, in line with earlier findings (Kreyenfeld 2010; Özcan, Mayer, and Luedicke 2010; Schmitt 2012), to pronounced negative association compared to those feeling secure about their job in the Postsocialist regime and similar but weaker association in the Universal cluster. Thus the relationship between perceived job security and short-term first-birth intentions seems to vary for women across welfare regime types and age groups both in 2004 and the crisis period.

Figure 5: Short-term intention probabilities by perceived job security in the survey years and different welfare regime clusters for childless women aged 25–29 and 30–35



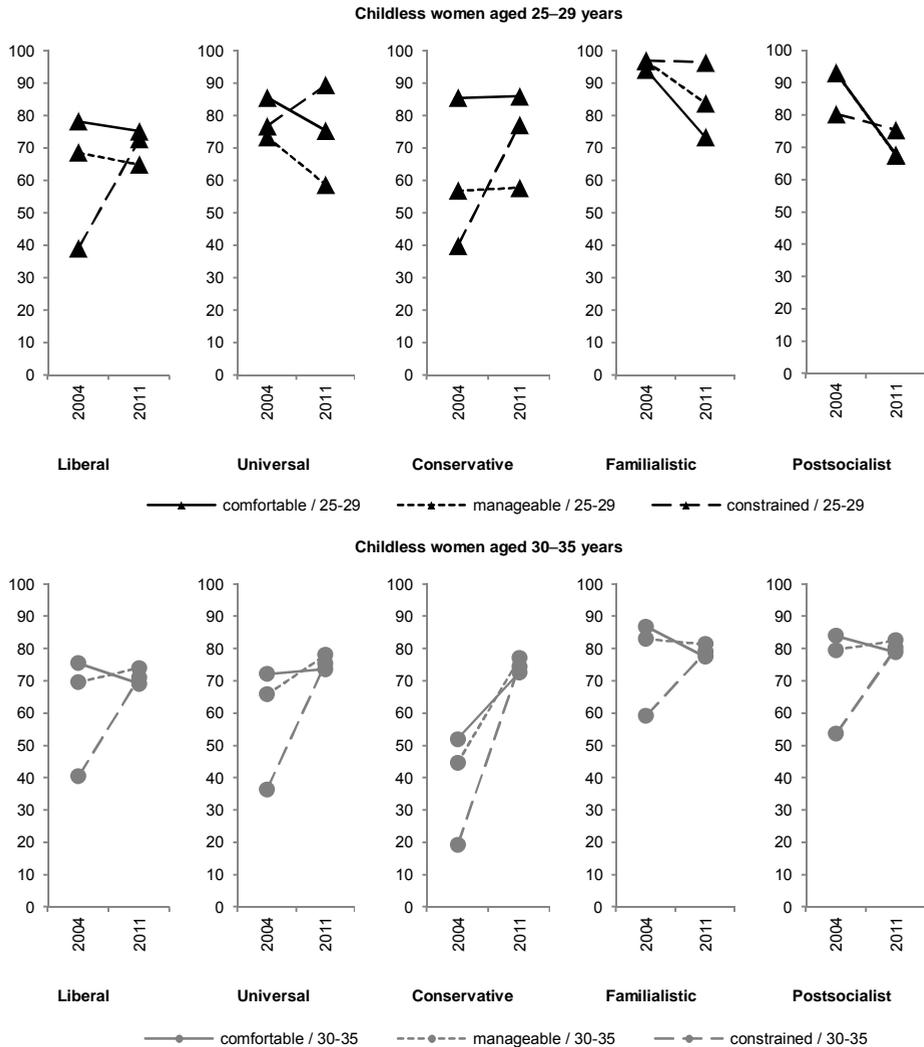
Next we look at interaction effects with respect to subjective income situation. Figure 6 illustrates the interactions between survey year, perceived income security, and

welfare regime clusters for childless women aged 25–29 and 30–35 years.¹¹ For women aged 25–29 (Figure 6, upper row), we find the lowest motherhood intentions in 2004 among those who perceive their economic situation as constrained in all but the Universal and the Familialistic clusters. In 2011, women in a constrained economic situation are not the ones with the lowest first-birth intentions in any welfare regime types, but those in manageable situation are, except for the Familialistic regime type. Thus the patterns indicate that perceived income insecurity matters less for young women's short-term first birth plans in times of substantial societal economic uncertainty than in economically less uncertain periods.

For women aged 30–35 (Figure 6, lower row), the intention probabilities of those who perceive their income situation as constrained, are higher in all welfare regime types in 2011 than before the crisis. In fact, there is little difference in 2011 between their intentions and those with either manageable or comfortable situations, unlike in 2004 when the lowest intention probabilities were seen for women in constrained economic situations across welfare clusters. Societal economic uncertainty appears to matter more to women with comfortable income situations in the Liberal, the Familialistic, and the Postsocialist regime clusters, as seen in their somewhat lower intention probabilities in 2011 compared to 2004. Taken together, the findings suggests that, in times of greater societal economic uncertainty as compared to more stable periods, perceived income insecurity has little importance for motherhood intentions among women in their early thirties in all welfare regime types, even less than among women in their late twenties. Unlike for the association between perceived job security and motherhood intentions, differences by welfare clusters and age groups are hardly noticeable.

¹¹ The calculations adjust for perceived employment security, education and partner's labour-force attachment. These variables are set at baseline.

Figure 6: Short-term intention probabilities by perceived income security in the survey years and different welfare regime clusters for childless women aged 25–29 and 30–35



Note: For the Postsocialist regime, the lines for comfortable and manageable situations, age 25–29 years, overlap.

6.2.3 Uncertainty and short-term intentions of entering fatherhood

Next, we turn to childless men. Table 4 displays the regression results for age groups 25–35 and 36–49 years, analysed separately. We find significant interaction effects for our main variables of interest, presented in the next section. Regarding individual characteristics, age below mid-thirties seems to matter less (Model 2) but men aged 36–40 are more likely to intend to have a child in the near future than those at ages 41–49 (Models 3–4). As for educational attainment, we find for both age groups that less educated men are less likely to plan to become fathers within short (Models 1–4). Partner’s labour-force attachment matters only for men in more mature ages, as her not being employed decreases fatherhood intentions for men aged 36–49, no matter whether interactions are taken into account or not (Models 1–4).

Table 4: Logistic regression of childbearing intentions of childless men, age groups 25–35 and 36–49 years (coefficients)

	Men 25–35 years		Men 36–49 years	
	Model 1	Model 2	Model 3	Model 4
Survey year				
Year 2004	ref.	ref.	ref.	ref.
Year 2011	–0.28 (*)	–0.42 *	–0.28	–1.05 (**)
Perceived employment security				
Secure job	ref.	ref.	ref.	ref.
Insecure job	0.06	–2.23 *	0.00	0.81 *
Unemployed	0.43	–0.90	–1.05 (*)	0.39
Other	0.24	–2.76 *	–0.40	–0.24
Perceived income security				
Manageable economic situation	ref.	ref.	ref.	ref.
Comfortable economic situation	0.44 *	–0.35	–0.10	–0.11
Constrained economic situation	–0.59 *	–2.10 ***	0.23	0.25
Age				
25–29	ref.	ref.		
30–35	0.32 (*)	–0.04		
36–40			ref.	ref.
41–49			–2.00 ***	–2.04 ***
Educational attainment				
Lower secondary level or less	–0.44 (*)	–0.54 *	–0.59 (*)	–0.65 (**)
Upper secondary level	ref.	ref.	ref.	ref.
Tertiary education	0.04	0.04	0.22	0.13

Table 4: (Continued)

	Men 25–35 years		Men 36–49 years	
	Model 1	Model 2	Model 3	Model 4
Partner's labour-force attachment				
Partner in paid work	ref.	ref.	ref.	ref.
Partner not in paid work	-0.27	-0.27	-1.83 ***	-1.78 ***
Welfare regime				
Liberal	ref.	ref.	ref.	ref.
Universal	0.04	0.26	-0.35	-1.36 (*)
Conservative	-0.12	0.33	-0.04	-0.83 (*)
Familialistic	0.48 *	0.51	0.52	-0.36
Postsocialist	0.53 *	1.16 (*)	0.01	-1.67 *
2011*Welfare regime				
2011*Universal				1.94
2011*Conservative				1.39 *
2011*Familialistic				1.82 *
2011*Postsocialist				2.99 **
2011*Perceived employment security				
2011*Insecure job				-1.55 **
2011*Unemployed				-3.07 *
Welfare regime *Perceived income security				
Universal*Comfortable economic situation		0.79		
Conservative*Comfortable economic situation		1.32 **		
Familialistic*Comfortable economic situation		0.76		
Postsocialist*Comfortable economic situation		1.18		
Universal*Constrained economic situation		1.62		
Conservative*Constrained economic situation		2.72 ***		
Familialistic*Constrained economic situation		2.16 **		
Postsocialist*Constrained economic situation		1.34 (*)		
Perceived employment security*Age				
Insecure job*30-35		0.88 *		
Unemployed*30-35		0.55		
Constant	0.59 *	1.45 ***	0.75 *	1.22 **
Nagelkerke R Square	0.08	0.13	0.36	0.41
-2 LLR	45.80 ***	72.56 ***	152.26 ***	173.98 ***
Df	15	26	15	22

Note: ***p ≤0.001; **p ≤0.01; *p ≤0.05; (*)p ≤0.1.

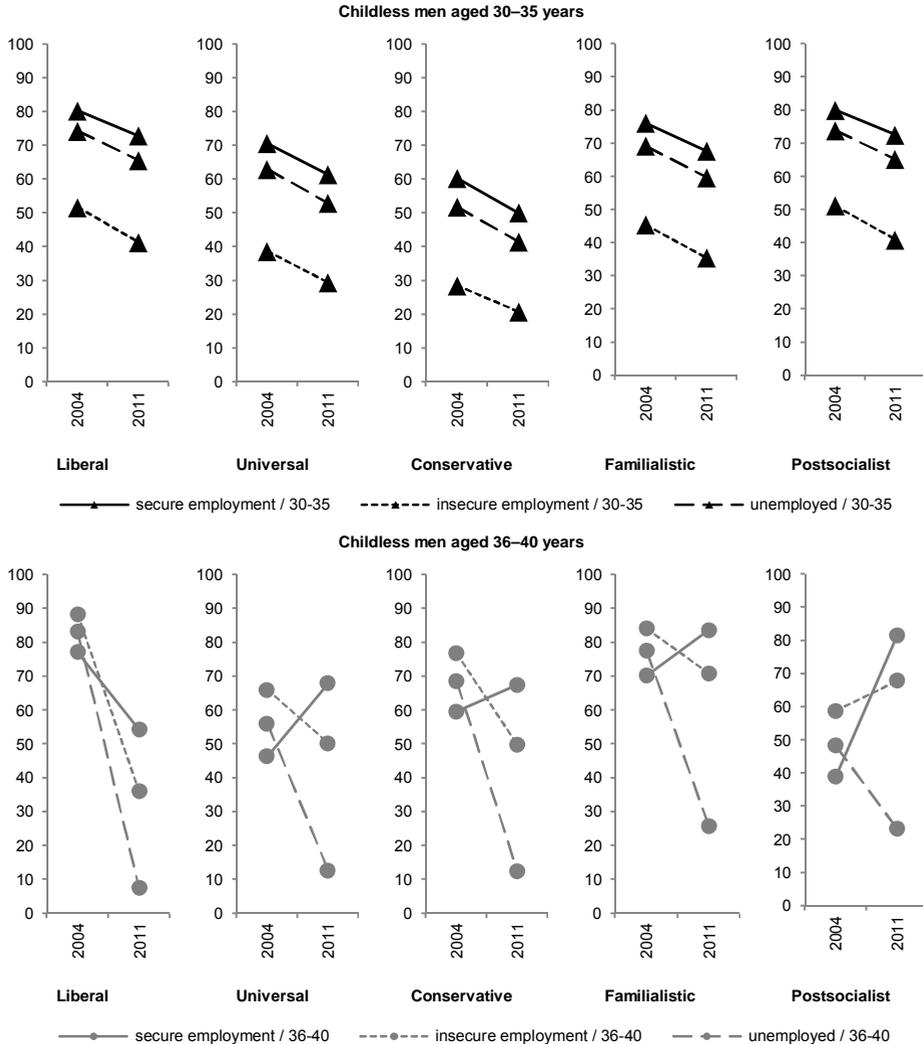
6.2.4 Fatherhood intentions across welfare regimes

Similarly to the analyses on women, we calculate intention probabilities for men's plans regarding fatherhood at ages when they are most likely to intend to have a child within short, that is 30–35 and 36–40 years¹² (see Table 4, Model 2, and Model 4). As Figure 7 shows, the relationship between birth intentions and job security varies by age group, survey year, and welfare regime clusters. For ages 30–35 (Figure 7, upper row), the intention probabilities are lower in 2011 than in 2004 independently of welfare regime type. For both years, the lowest fatherhood intention probabilities are seen among men who perceive their job as insecure, while unemployment appears to matter less, similarly to the pattern for women in their late twenties (Figure 5). Unlike for women, however, the perception of one's employment being secure is associated with the highest first-birth intention probabilities among men in their early thirties in all welfare clusters.

For men aged 36–40 (Figure 7, lower row), we find larger differences by perceived job security regarding short-term fatherhood plans in the aftermath of the crisis compared to 2004 in all welfare regime types. Perception of a secure employment seems less important for first-birth intentions prior to the crisis. In 2011 however, unemployed men display the least capability to plan for a child in the near future in all clusters, whereas men with a secure job show highest intention probabilities. Compared to 2004, their fatherhood intention probabilities even increased in all but the Liberal regime, unlike for men with perceived insecure positions or being unemployed. Taken together, the findings indicate that unemployment and perceived employment insecurity are associated with reduced first childbearing intentions for men in their thirties, in times of pronounced societal economic uncertainty, independently of welfare regime types. This may be related to the emphasis on men's provider responsibilities being strengthened in times of economic crisis across various institutional contexts, unlike for women.

¹² The calculations adjust for perceived income security, education, and partner's labour-force attachment. These variables are set at baseline (see Table 4).

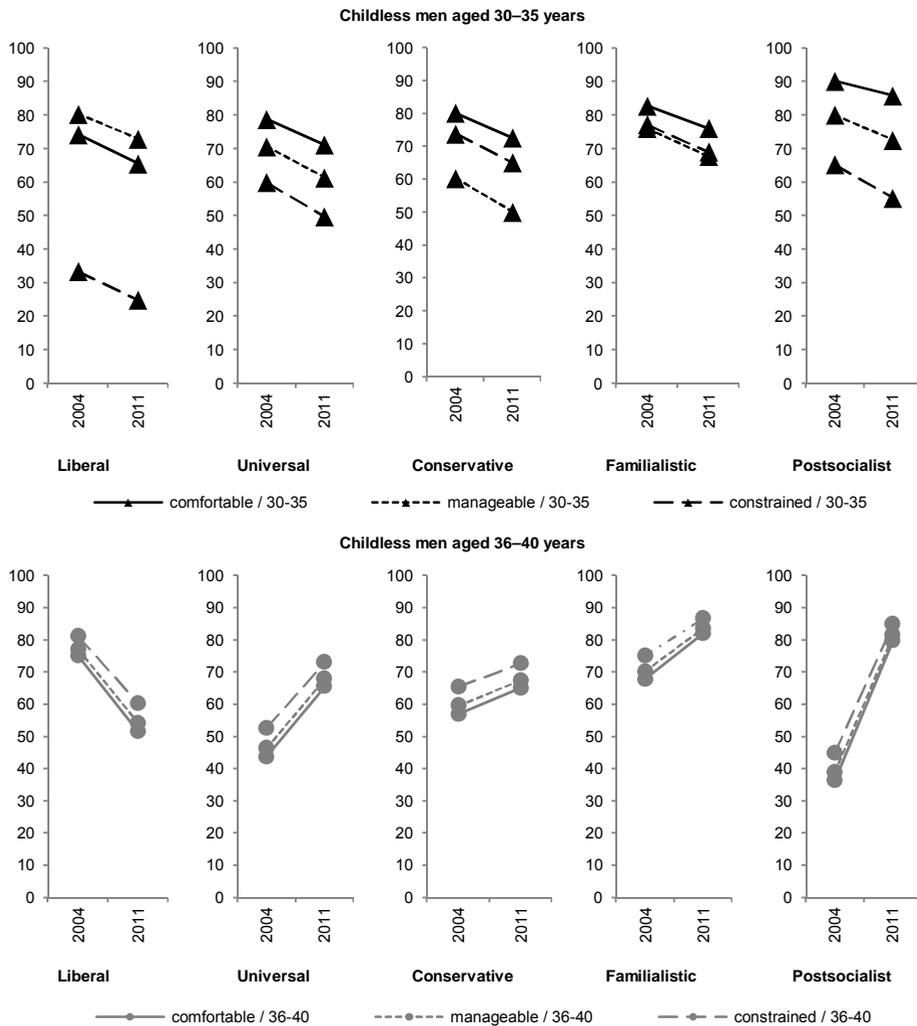
Figure 7: Short-term intention probabilities by perceived job security in the survey years and different welfare regime clusters for childless men aged 30–35 and 36–40



Next we focus on interaction effects with respect to men's subjective income security. Childless men ages 30–35 (Figure 8, lower row) have lower intention probabilities to father a child in the near future in 2011 than in 2004 across welfare regimes, and regardless of their perceived income situation. Yet in all welfare clusters, men in constrained economic situation are less likely to intend to become fathers within three years than men with comfortable economic position, both before the crisis and in 2011. The difference between the intention probabilities of men in these subjective income categories varies, however, across regime types, with the most pronounced difference seen in the Liberal regime, followed by the Postsocialist and the Universal clusters where men in constrained economic situation have the lowest intention probabilities to become fathers within a short time. For the Conservative and the Familialistic regime types we find the lowest fatherhood intentions for men in manageable income situation, with little difference to those in constrained situation in the latter. Hence, subjective income security seems to matter for short-term childbearing plans of men in their early thirties, especially in times of greater societal economic uncertainty.

For men aged 36–40 (Figure 8, lower row), we find a different pattern. In the Liberal regime type, their intention probabilities are lower by 2011 than before the crisis, whereas fatherhood intentions are higher for them in all other welfare regime types in the aftermath of the crisis, especially so in the Postsocialist cluster. The difference in intention probabilities for the three income categories is, however, rather small in all welfare clusters and is much smaller than for the younger age group (with opposite pattern, except for the Liberal regime type). In any case, the association between subjective income security and men's short-term childbearing intentions varies more across welfare regimes, survey years, and age groups than for perceived job security, unlike the relationships seen in the models for women.

Figure 8: Short-term intention probabilities by perceived income security in the survey years and different welfare regime clusters for childless men aged 30–35 and 36–40



7. Summary and conclusions

In this study we have addressed the interplay between macroeconomic conditions, individual economic uncertainty, and short-term first-birth intentions of men and women in ten European countries representing various institutional and policy contexts. Focusing on changes in unemployment rates and the employment protection legislation, we have found in our macro-level analysis a negative association between increased societal economic uncertainty and aggregated intentions to become a parent within a few years. The strength of the association varies by gender, men being more responsive to increased risks than women, which is likely to reflect men's role as main provider. The micro-level analyses also indicate that more pronounced societal economic uncertainty, as in the aftermath of the Great Recession, matters more for men seen in their lower fatherhood intentions compared to 2004, whereas motherhood intentions have not changed substantially.

The relationship between individual-level uncertainty and childbearing plans seems to vary across welfare regime types, age, and gender, as revealed by the interaction analyses. Regarding perceived job security, secure employment enhances fatherhood intentions, especially at ages below the mid-thirties, independently of societal economic uncertainty and welfare regime type. In their late thirties, being unemployed suppresses men's childbearing plans the most, at times of pronounced societal economic uncertainty, while insecure job situations matter less, particularly before the economic crisis. For women, secure employment seems to be a precondition of motherhood plans in most welfare regimes, but unemployment does not suppress first-birth intentions much, except for more mature ages in the Postsocialist regime, and somewhat less so in the Universal cluster. Policy support for the dual-earner family is quite substantial in the latter regimes, influencing women's views on the importance of being employed when considering motherhood. The findings highlight the continued importance of men's labour market position for family formation in general, independently of institutional contexts and business cycles, while women's perceived job security matters mainly at younger ages, and in specific policy contexts (most in the Postsocialist and Familialistic clusters, and least in the Liberal regime type).

As for perceived income security, a comfortable situation is associated with enhanced fatherhood intentions for men in their early thirties across welfare regimes, both prior to the crisis and the aftermath. Constrained situation seems to matter little for men above age 35 independently of regime type, unlike at younger ages when the lowest fatherhood intentions are displayed for this income situation in most regime clusters. For women below age 30, a constrained situation relates to the lowest intentions in the Liberal, Conservative, and Postsocialist regimes before the crisis, but we see very little difference by income situation for women in their early thirties across

welfare regimes in 2011. Thus, perceived income security seems to be less important for short-term parenthood intentions at higher ages (men in late thirties and women in early thirties), independently of the institutional context in the aftermath of the crisis, and for men also before the crisis. At younger ages, a constrained income situation appears to impede first-birth plans for men in particular, both before the Great Recession and the aftermath. For young women, subjective income situation matters only in the precrisis year.

Taken together the findings of this study, we conclude that economic security has remained an important aspect in the family building process in times of societal economic uncertainty, especially for men, related to their primary provider role as perceived by themselves and in the society, irrespectively of the institutional context. This can impede the transition to the dual-earner family, considered as supportive for fertility. For women, economic insecurity matters less for motherhood plans, and mainly for ages below 30, with varying extent across welfare regime types at more mature ages in particular.

8. Acknowledgements

The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007–2013) under grant agreement no. 320116 for the research project FamiliesAndSocieties. We also thank the Linnaeus Center on Social Policy and Family Dynamics in Europe, SPaDE (grant number 349-2997-8701) at Stockholm University Demography Unit for support. Excellent suggestions from two anonymous reviewers and the editors, especially Irena E. Kotowska are gratefully acknowledged. The authors have contributed equally to this paper.

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