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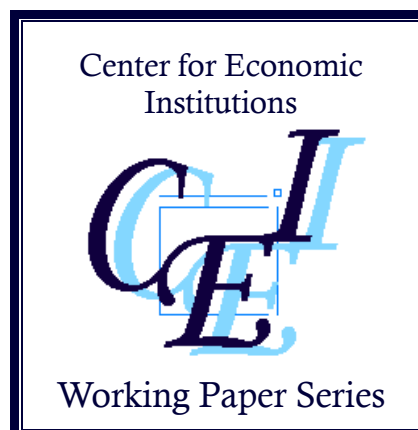
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**"Job Stability and Fertility Intentions of Young Adults in
Europe: Does Labor Market Legislation Matter?"**

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Job stability and fertility intentions of young adults in Europe: does labor market legislation matter?

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Abstract

Birth rates have declined dramatically in many European countries during the last 40 years. Postponed marriages and delays in childbirth resulting from the global changes in values can only partially explain this decline. A main reason for the decline is the rise in job and income instability caused by labor market polarization. The growth of flexible market relations increased the uncertainty and job instability that are crucial to childbirth planning for young adults. This paper aims to disclose the impact of job instability on the fertility intentions of young European adults by focusing on employment protection legislation (EPL). The empirical analysis is grounded in European Social Survey data of 2004 and 2010 for 27 countries. The results of the multilevel modeling show that job instability measured as temporary employment, informal work, and unemployment decrease fertility intentions. Unemployed young adults plan less for having their first child under a rigid labor market system. Unexpectedly, temporary and informally employed young people decrease their fertility intentions in countries with low EPL rates.

Keywords: job instability, fertility intentions, employment type, employment protection legislation, dual labor markets, Europe

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1. Introduction

Only a few European countries have experienced fertility growth in the last 20 years, while others have been facing a considerable decline in birth rates and fertility far below replacement level (Feyrer *et al.*, 2008; Balbo *et al.*, 2013; Rindfuss and Choe, 2015). In the 1970–1990s fertility shortages were explained by an increased female share in higher education and the labor force (Butz and Ward, 1979; Becker, 1981; Bloom and Trussell, 1984; Kiernan, 1989; Jacobson and Heaton, 1991). Since the 2000s more and more studies show the opposite relationship: the higher the female employment rate in the country, the higher the fertility rate (Ahn and Mira, 2002; Adsera, 2005). Later, it was proved that women's employment status plays an even greater role in fertility decisions than the employment rate in general (Adsera, 2005; Adsera and Menendez, 2011; Del Bono *et al.*, 2011).

This study goes further and investigates the impact of job instability on fertility intentions for young adults across European countries. Fertility intentions, desired number of children, or planning to have a child are widely treated as indicators measuring the population's fertility behavior (Modena and Sabatini, 2012; Dommermuth *et al.*, 2015; Karabchuk, 2017). Previous research showed that about 70–80% of childbirths were desired and planned (Karabchuk, 2017). In this regard, it is important to understand the conditions that motivate young people to implement their reproductive intentions.

Job stability accounts for stable earnings and self-assurance in the future while involuntary job switches as well as periods of unemployment usually lead to human capital deterioration and decrease in earning potential (Bergmann and Mertens, 2011, p. 421). By job instability we mean temporary employment, informal employment, and unemployment, which are unstable statuses in terms of job security, social benefits, and earnings in the labor market. Recent studies show that most non-permanent types of work are insecure (with no social benefits or social guarantees) and associated with lack of career opportunities, long-term unemployment, being trapped in temporary jobs, and wage losses (Sverke and Hellgren, 2002; Schmieder *et al.*, 2009; Kalleberg, 2011; Yu, 2012). Further outcomes are unpalatable health consequences (Virtanen *et al.*, 2005; Romeu, 2006; Eliason and Storrie, 2009). Owing to unstable incomes and uncertainty in the future, job instability makes young adults postpone marriage and childbearing—an unpleasant negative outcome for the population leading to fertility decline (Adsera, 2005; Kalleberg, 2011).

There are few recent publications on the relationship between job instability and family formation in general, and fertility in particular. All of them are empirical European country-case studies but they arrive at the same results: job instability negatively affects fertility and plans for childbearing (Adsera and Menendez, 2011; Del Bono *et al.*, 2011; Modena and Sabatini, 2012; Auer and Danzer, 2016). An Italian case revealed that the instability of women's work status (i.e., having occasional, precarious, and low-paid positions) or female unemployment is a significant dissuasive factor in planning childbearing (Modena and Sabatini, 2012). German longitudinal data led to the conclusion that women tend to postpone first birth because of fixed-term employment at labor market entry, and reduced the number of children in the first 10 years after graduation (Auer and Danzer, 2016). Job loss for highly educated women causes less children born in Finland (Huttunen and Kellokumpu, 2012). The importance of job stability and well-paid jobs led to women having one more child in Russia (Sinyavskaya and Billingsley, 2013; Karabchuk, 2017).

Nevertheless there are no studies on job instability and fertility published from a cross-country perspective. Moreover, the labor market regulations as a main predictor of job instability share in a country were almost neglected. Therefore, the goal of this paper is to disclose the effects of job instability on fertility intentions among young adults and explain the cross-country differences of these effects in Europe through the employment protection legislation (EPL).

The added value of this paper is that it offers additional details to the theoretical explanation of fertility behavior in contemporary Europe grounded on empirical tests. The author argues that given changes in modern values toward gender equality and a switch to emancipatory values, strict EPL will not contribute to fertility growth due to rapidly increasing job instability and job insecurity globally. Using the European Social Survey individual data of 2004 and 2010, the author examines

whether countries' EPL variations have an impact on young adults' childbearing intentions according to their labor market status.

The paper is organized as follows: the following section depicts the European statistics on fertility and job instability. This allows better understanding of the situation's context. The theoretical argument provided after the statistical description provides grounds for the empirical hypotheses. The data and methodology are described in the third section, while the fourth section offers analysis and discussion of the empirical results. Conclusions and policy recommendations are offered in the final section.

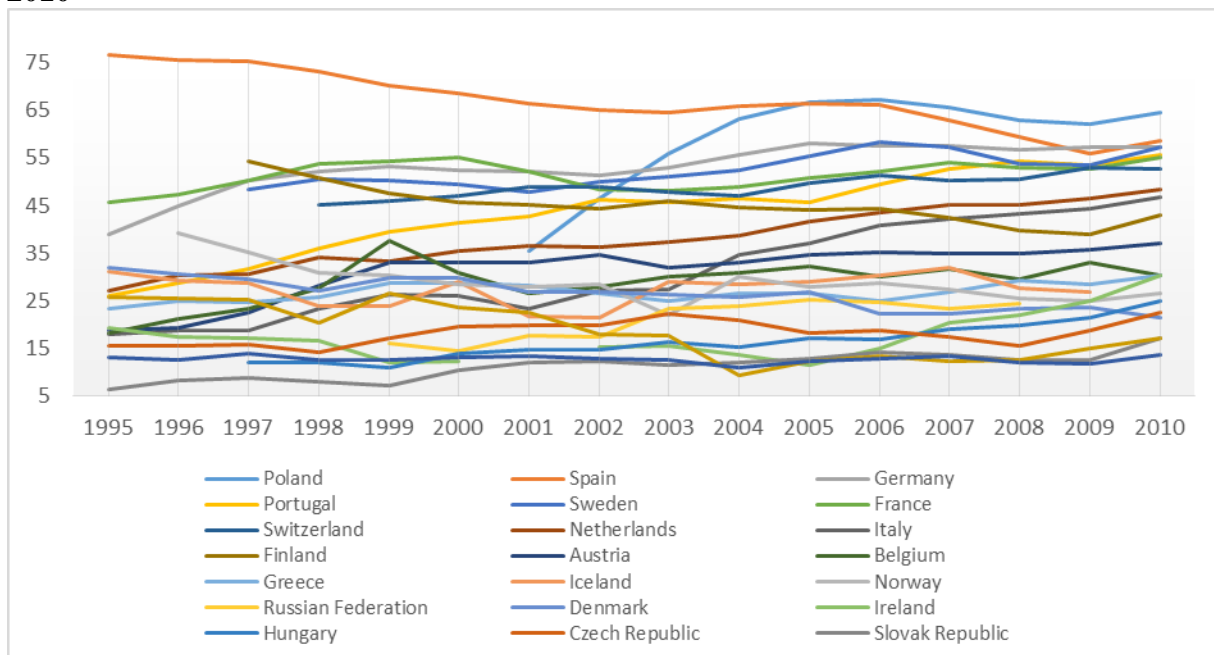
2. Rise of job instability in the world and in Europe

Because of growing market flexibility and globalization, the share of permanent secure jobs is constantly declining in many countries inside and outside of Europe (Farber, 1997, 1999; Valletta, 1999; Kalleberg, 2000, 2011). Various forms of unstable employment have spread widely within the last 30 years: fixed-term contracts, temporary agency work, casual work, on-call work, oral working arrangements, etc. (Kalleberg, 2000; Valenzuela, 2003; Yu, 2012). Not all European countries experienced the steady growth of temporary work; a few (e.g., U.K. and Ireland) witnessed fixed low rates of temporary employment.

In general, the level of temporary employment in 2010 varied from 5% in the U.K. to about 20% in Portugal, 21% in Spain, and 27% in Poland. On average every sixth person of working age had a job with a limited in-time contract, which means they experienced job instability. The problem is exacerbated by the fact that these unstable jobs are mostly found among younger workers (up to 35 years) (OECD, 2013). In some European countries, up to 60 or 70% of youth aged 15–24¹ are working on temporary contracts (see Figure 1).

The higher proportion of fixed-term contracts, daily workers, casual, and informal employment in a country suggests less stability on the labor market and a huge polarization in society (Givord and Maurin, 2004; Grotheer and Struck, 2006; Erlinghagen, 2006; Bergmann and Mertens, 2011). Unstable jobs or unemployment lead to income instability and uncertainty in people's lives, which negatively affect family formation and fertility intentions.

Figure 1. Temporary employment rates for the European population aged 15-24 years, 1995-2010



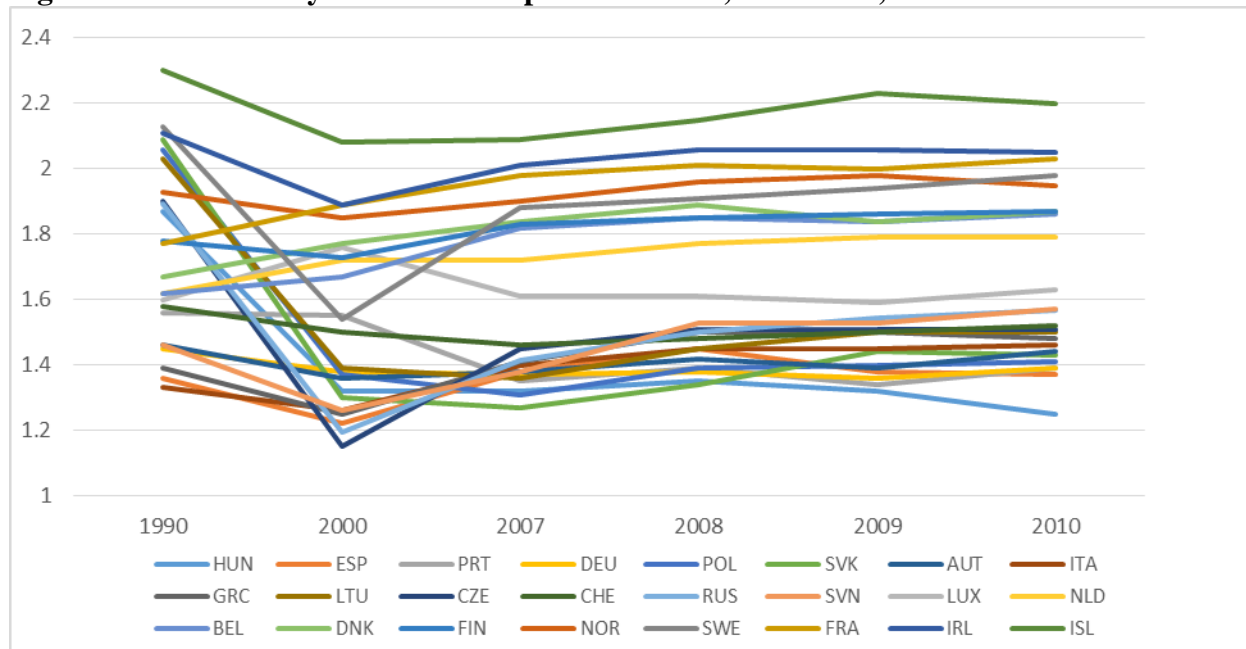
Source: Employment by permanency of the job: incidence. OECD (2016).

2.1 Fertility decline and job instability increase

Against the background of extensive world birth-rate decline, there are three patterns of fertility dynamics in Europe during the 2000s (see Figure 2). Several countries have experienced a constant growth in fertility rates, and by 2010 the indicator reached about two children per female in France, Iceland, Ireland, Sweden, and the U.K. The vast majority of European countries witnessed moderate increases, but the rates are still below reproductive levels (Russia, Slovenia, Netherlands, Estonia, etc.). The third group of countries had a negative or frozen dynamic with very low fertility rates (Germany, Slovakia, Latvia, Italy, etc.).

A considerable bulk of the literature demonstrates that fertility behavior is affected by labor market conditions both on macro and micro levels. In the 1970s and 1980s greater opportunities for women in the workforce and in higher education, and better prospects for good careers and lower probability for parenthood are (Bloom and Trussell, 1984; Kiernan, 1989; Jacobson and Heaton, 1991; DiCioccio and Wunnava, 2008). The rewards from the labor market became higher than rewards from childbearing, and many females changed the ideal family pattern from having two or three children to one or even none (Hochschild, 1996; Kiecolt, 2003; Hakim, 2003; Liefbroer, 2005).

Figure 2. Total fertility rates¹ in European countries, 1990-2010, UN data



Source: (1) United Nations Population Division. World Population Prospects, (2) Census reports and other statistical publications from national statistical offices, (3) Eurostat: Demographic Statistics, (4) United Nations Statistical Division. Population and Vital Statistics Report (various years), (5) U.S. Census Bureau: International Database, and (6) Secretariat of the Pacific Community: Statistics and Demography Programme.

Starting from the 1990s, the correlation between female labor market activity and fertility on a macro level proved to be positive (Ahn and Mira, 2002; Adsera 2005), particularly for northern European countries that were implementing fertility programs to assist working mothers (Del Boca, 2002; Del Boca and Sauer, 2009; Duvander *et al.*, 2010), while unemployment was found to have a negative impact on fertility (Adsera, 2005; Adsera and Menendez, 2011; Del Bono *et al.*, 2012). Aggregated unemployment rates reflecting labor market instability determined individual fertility

¹ Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

behavior through fear of unemployment (Kreyenfeld, 2010, Gimpelson and Oshchepkov, 2012) and the high risk of losing a job (Del Bono *et al.*, 2011; Wulfgramm and Fervers, 2015). Moreover, it was shown that after the first childbirth those unemployed women were discouraged from having a second and third baby after long-term re-entry into the labor market (Hoem and Hoem, 1989; Kravdal, 2002; Meron *et al.*, 2002).

In a few published papers we can determine that job instability (captured by indicators such as unemployment, job displacement, job loss, fixed-term contracts, temporary contracts, casual work, informal employment, and part-time work) proved to have negative effects on fertility behavior (Adsera, 2011; Del Bono *et al.*, 2011; Del Bono *et al.*, 2012; DiCioccio and Wunnava, 2008). However, existing empirical studies concentrated either on specific occupational groups like white-collar female workers in Austria or highly educated females in Finland (Del Bono *et al.*, 2012; Huttunen and Kellokumpu, 2012) or estimated the total number of children rather than the probability or intentions to have a child (Del Bono *et al.*, 2011); or they used macro-level data on fertility as a dependent variable (Ahn and Mira, 2002; Adsera, 2004) or focused on part-time jobs, which have a different character than temporary or informal contracts (Del Boca, 2002, DiCioccio and Wunnava, 2008).

High unemployment rates in the country negatively influence fertility rates as women, aware of the difficulty of re-entering the labor market after childbirth due to the scarcity of jobs, will be less likely to exit the labor market (Del Boca and Pasqua, 2003). Greater insecurity and instability in the labor market increases the fear of losing a job (Lokshin *et al.*, 2012) and not having enough income to support a family (Del Bono, 2002). For example, in Spain in 1985–1999 young women tended to restrict their fertility below their ideal level because of worsening economic conditions and rising unemployment in the country; this tendency was much weaker for females employed in the more stable public sector (Adsera, 2006). For white-collar women, experiencing unemployment after job displacement in Austria decreased fertility for the next three years by 17.4% (Del Bono *et al.*, 2011). The authors explain the decline in fertility for these women after a plant closure by their need to find a new job and start a new career after job displacement. Moreover, the effects of job displacement or job loss on fertility in terms of employability and career have a bigger impact than do income effects (Del Bono *et al.*, 2012; Huttunen and Kellokumpu, 2012). These results demonstrating the negative effect of job instability on fertility are nearly in line with the further theoretical explanations provided below.

Unemployment rates are easily available and typically used as a first indicator for labor market instability; however, as they are not a perfect measure (Del Bono *et al.*, 2011) we need to look at other employment types to measure job instability. Thus, this paper aims to analyze the impact of contract types on fertility intentions along with unemployment. Furthermore, we wish to provide a theoretical argument to explain the links between job instability and fertility in respect to labor legislation systems. To work out this explanatory mechanism we turn to segmentation theories and their applicability to the research questions.

2.2 Labor legislation and its effect on job stability

The theoretical approach stems from three theories that are very similar: 1) the theory of the dual labor market was elaborated by Doeringer and Piore (Doeringer, 1967; Doeringer and Piore, 1971; Bosanquet and Doeringer, 1973; Piore, 1978; Doeringer, 1986). They argue over market segmentation, which consists of the so-called primary (internal or closed) labor market and the secondary (external or open) labor market. 2) The second theory is that of the open/closed-position systems (the further development of the internal/external labor market theory) (Sorensen, 1983). The mechanism of allocation (access to positions) is described as a vacancy competition for closed-position systems and competitive markets for open-position systems, where “incumbents of positions can be replaced at any moment in time and occurrence of vacancies is irrelevant for the timing of new allocations” (Sorensen, 1983, p. 206). 3) The third insider/outsider theory was published in “The insider-outsider theory” by Lindbeck and Snower in 2002.

According to these three approaches, the labor market is divided into two parts—the core and the periphery. The core employees are well protected by employment legislation and they usually occupy better positions, better bargaining power, and better payment. Those workers in the secondary sector (or periphery) usually suffer from uncertainty and instability. They have no social benefits, no social guarantees, and experience a lack of career opportunities, less pay, and less training; often, they experience poor working conditions. This theoretical debate on the division of the core and periphery of the labor market provided grounds for the concept of decent work developed by the International Labour Organization (ILO, 1999; Ghai, 2003) and the concept of precarious jobs (Beck, 2000; Kalleberg, 2011; Standing, 2011).

In some European countries the gap between the core and the periphery is huge and it is difficult to cross the border between them as mobility is restricted. Usually, such countries have very strict EPL, which facilitates this division in the labor market. Strong protection of the core workers increases the hiring and firing costs for employers and this restricts the number of vacancies they are willing to make available. The restricted number of vacancies makes it difficult to enter or re-enter the labor market for outsiders (newcomers or the unemployed) and increases the share and span of unemployment. Moreover, in an overregulated labor market employers vote for temporary contracts to reduce their labor costs and this accounts for high level of temporary employment in the economy (Cahuk and Postel-Vinay, 2001; Kahn, 2007; Cazes and Tonin, 2010; Bergmann and Mertens, 2011; Wulfgramm and Fervers, 2015; Hipp *et al.*, 2015).

The big share of temporary employment brings instability to the labor market. As mentioned, these temporary jobs usually have no social security or social benefits, and are characterized by lower wages, fewer career opportunities, and so on. Less on-the-job training for temporary workers results in lower incomes in the future, thereby making these a kind of dead end. Thus, temporary workers are less likely to create families and produce children (Piotrowski *et al.* 2015; Sharni and Dale, 2015; Auer and Danzer, 2016). The growth of such jobs on the one hand increases polarization and instability in the labor market, and on the other hand contributes to fertility shortage and prolongation of pregnancy planning. Strict regulation leads to the expansion of temporary employment that hampers long-term family planning (Wulfgramm and Fervers, 2015; Birch Petersen *et al.* 2015; Alesina *et al.* 2015).

In other countries with liberal labor legislation, the distinction between good permanent jobs and precarious temporary jobs is less feasible as all employees could easily be fired. The type of contract is not of such importance to people as none of them are secure and, at the same time, the labor market is more mobile. The high mobility does not scare people as much as in strictly regulated labor markets and does not prevent them from childbearing, as the processes for entering or re-entering the labor market are not so difficult. Employees are sure that they can easily find another job.

The employers open sufficient vacancies as they are not restricted by high firing costs. Additionally, in countries with liberal employment legislation, such as the U.K. and Ireland, the need for temporary contracts or informal employment is less as employers have flexibility in recruitment and dismissals (Wulfgramm and Fervers, 2015). Therefore, weak employment protection legislation is usually associated with no barriers to entering the labor market and low rates of unemployment (Hipp *et al.* 2015). Even though such liberal labor markets are highly competitive and one can easily lose a job, they provide more opportunities for job shifts, and the time span of being unemployed is relatively smaller than in markets with strict EPL. The share of temporary or informal jobs is lower and that contributes positively to childbearing and family planning.

The outcome from this theoretical discussion is the assumption concerning the significant difference between rigid and liberal labor markets for those people with temporary positions. The fact that the majority of young adults under 35 years old have temporary, insecure jobs and are at higher risk of unemployment (O'Reilly *et al.*, 2015) facilitates the correlation between job stability and fertility intentions.

The first hypothesis that will be tested is as follows: *in European countries, young men and women who are unemployed or have temporary or informal jobs will be less likely to plan to have children within the next three years than those with permanent positions (H1)*. Young adults employed on a temporary basis or unemployed are less likely to create families owing to perceived income uncertainty in the future. Having temporary positions or being unemployed in strictly regulated labor markets means young adults will continue to search for better career opportunities and good permanent jobs that involve postponing pregnancy planning.

H1a: As this is especially true for the first child, a stronger effect from job instability is expected for first-child planning than for next children.

H1b: Those young men with temporary or informal labor contracts are more affected than young women. Following previous economic studies, I assume that employment status, i.e., job stability, will be more important for traditional male breadwinners.

With respect to cross-country differences, I formulate first the macro-level hypotheses regarding the EPL indices. *In rigid labor markets the probability of planning childbirth in the next three years is smaller than in liberal labor markets (H2)*. This means that at the country level, the EPL will have a negative impact on childbirth intentions for young adults under 35 as the growing job instability that is generated by rigid EPL will decrease fertility rates. In other words, we expect to disclose the negative significant correlation between EPL and fertility intentions on the individual level.

Finally, I expect to test the cross-country differences in fertility intentions according to employment status with respect to EPL. Labor market legislation is seen as the explanatory mediating variable between job instability and childbirth planning in cross-country perspective. Thus, *in countries with rigid employment legislation (where EPL reaches maximum values) temporary and informal employment will be associated with lower fertility intentions (H3a)*. This will be especially true for young females as career breaks for childbearing are too costly for them. In terms of job and income stability, primary sector employment is the necessary condition for good family prospects. Those young adults engaged in temporary employment will avoid childbearing until they obtain good, permanent jobs. Those engaged in good jobs (especially women) will prefer career development and postpone childbearing due to the high costs of childbirth. An example from Austria, a country with somewhat strict labor legislation, illustrates that withdrawal from the white-collar primary sector results in difficulties in re-entry, which is why white-collar women employees decrease their fertility for the next few years after job displacement as they need to settle into new careers (Del Bono *et al.*, 2011).

While in countries with liberal labor legislation (where EPL indices are close to minimum) temporary and informal employment will not influence the fertility intentions of young adults (H3b). In this case the correlation between employment status and fertility intentions should not be significant. We can assume that in such countries young people depend less on the contract type when making decisions on childbearing and this would be especially true for young women.

At first sight these assumptions partially contradict the previous theory of open/closed labor markets concerning family formation, which claimed that females working in the secondary labor market have a higher probability of childbearing. Wachter (1974) stated that fertility is lower for women working in the primary labor market, where wages are higher and income as well as career development increases according to specific human capital, and investments in education and job training. The lost years for childbirth are less costly for women employed in the secondary sector, where wages are lower, job training does not result in income growth, and there is a low rate of return on education (Wachter, 1974, p. 655). This theory was sufficient to explain family formation in combination with Becker's theory of the division of labor between husband and wife when husbands were supposed to be the breadwinners and wives were expected to stay home and take care of the family or combine low paid work with family roles (Becker, 1981).

Now that the situation has changed dramatically since the late 1970s, countries have experienced a second demographic transition. On the one hand, shifts in familial and work values, women's career orientations, and gender equality rights to pursue good jobs have appeared.

Becker's theory of the division of labor no longer works in a modern society with emancipatory values. On the other hand, the growing number of fixed-term contracts means a bigger share of those trapped in the secondary labor market, who want to gain permanent work. I assume this tendency to labor market polarization and the controversy between good and bad jobs is much stronger in rigid labor markets than in liberal ones, as countries with strong protections for core full-time male employment facilitate the trade-offs connected with childbearing for females (Adsera, 2006).

3. Data and Methodology

The empirical database is the European Social Survey² (ESS) waves for 2004 and 2010.³ The two waves were merged to allow for more countries on the second level of the analysis and bigger samples at the individual level⁴ for some countries. The ESS is the only available cross-country nationally representative dataset containing information on contract types and fertility intentions. The question on plans to have children as well as questions on the importance of job security and the possibility of combining work and family are asked only in these two waves in the rotating module. This dataset allows the identification of permanent employment (unlimited duration contracts), temporary workers (fixed-term contracts), and informal employees (no written contracts), as well as self-employment, unemployment, and non-activity. The sample was restricted to young individuals 18–34 years old and comprised 20,950 people.

The dependent variable (the dummy for fertility intentions) reflects a person's plans to have a child in the next three years. The main independent variable tested on the individual level is employment status. It has six possible outcomes: 1) permanently employed, 2) temporarily employed, 3) informally employed, 4) self-employed, 5) unemployed, and 6) non-active. Each respondent can belong to only one category at a time and the categories do not overlap. We follow the ILO definitions widely used in labor economics and labor sociology literature to identify each outcome concerning employment status in the data set.⁵ In the discussion section we focus mainly on temporary employment, informal work, and unemployment statuses, which reflect respondents' job instability.

As indicated previously, unemployment has true and non-negligible, strong and negative effects on fertility (Del Bono *et al.*, 2012). This result was obtained by studies that applied an instrumental variable in 2 SLS models tackling the endogeneity problem. The interpretation bias may stem from women with a high propensity to having children seeking less demanding jobs, careers with lower returns, and higher employment uncertainty. On the other hand, another explanatory logic may be true: women who plan to start a family may seek more stable careers and job security. Indeed Del Bono *et al.* (2012) concluded that job insecurity, i.e., unemployment, prevents fertility. This paper will move one step further and give ground to understanding how temporary or informal work affects fertility intentions across European countries.

The following individual level characteristics were used as control predictors of fertility intentions: gender (for the total youth population), education, having a spouse, subjective health, self-reported degree of religiosity, type of settlement, importance of job security (if choosing job) and importance of combining job and family (if choosing job). Previous research demonstrated that degree of religiosity, marital status, and a person's good health are key indicators for planning children. Such job values as the importance of job security and the possibility to combine work and family are important determinants for expanding families. Owing to the large number of missing answers to the question on income and the strong correlation between income and type of contract, it was not included in the final model as a control variable.⁶

To test the assumptions stated above regarding the countries differences, I added the EPL indices, produced by the OECD for 2004 and 2010, as country-level predictors for each corresponding year. This step reduced the number of countries to 27 as the EPL scores are not available for Bulgaria, Cyprus, Croatia, Lithuania, and Ukraine for 2004/2010. The countries are

ranked by the EPL scale from 0, which corresponds to totally open labor markets with liberal legislation, to 6 or totally closed labor markets with rigid legislation (OECD, 2013). The higher the rank, the stricter the EPL is in the country.

Specifically, I inserted two EPL sub-indices: **EPL on dismissals (EPL_dismissals)** and **EPL on temporary contracts (EPL_temps)** (see country rates in Appendix Table A2). The first, EPL_dismissals, concerns the regulations for individual dismissals and reflects how easily a person can be fired in a country (OECD 2013). It incorporates eight data items.⁷ The second, EPL_temps, measures the strictness of regulations on the use of fixed-term and temporary work agency contracts. It incorporates six data items.⁸ Both indicators are collected simultaneously as they reflect two different aspects of protection and strictness.

On the country level, Human Development Index (HDI)⁹ and number of weeks of paid maternity leave were also added to the model to control for the country-level development and family policies that can explain cross-country variation of fertility rates. The changes in time were controlled by EPL, HDI, and number of weeks for paid maternity leave.

Multilevel modeling with random effects for 27 countries was applied as the main instrument. The number of countries is enough to use multilevel modeling as we have only four second-level predictors in our models: two EPL indices, HDI, and number of weeks of paid maternity leave. We follow Snijders and Bosker (2012, p. 48), who claim that to have more than 20 second-level units (N) is enough for multilevel modeling with random effects under the condition of a sufficient number of individual level units (n) (it should be more than 100) and not too many second-level predictors (we have four). The descriptive statistics for the variables are provided in the Appendix in Table A1.

It is important to underline that I estimate models separately for those who have no children (sample size is 13,570 respondents), meaning they are planning to have their first child, and for those who already have at least one child (sample size is 6,035 respondents), meaning they are planning to have their next child. According to the demographic and sociological literature, the patterns of behavior for having the first or second child vary considerably (Vignoli *et al.*, 2012; Sinyavskaya and Billingsley, 2013; Karabchuk 2017; Karabchuk and Selezneva, 2017). The factors for having the first child might not be significant to planning for the second or third child.

Having a first child is a norm for creating a family, which is why the majority of women give birth to the first child irrespective of job characteristics and working conditions (Zakharov, 2000; Meron *et al.* 2002; Sinyavskaya and Billingsley, 2013; Karabchuk, 2017; Karabchuk and Selezneva, 2017). In contrast, job characteristics like the opportunity to work from home and flexible working hours significantly increase the chances of a woman having more than one child (Adsera, 2005; Sinyavskaya and Billingsley, 2013). The likelihood of bearing a second child is also increased by stable employment (Adsera, 2011; Vignoli *et al.*, 2012; Sinyavskaya and Billingsley, 2013) and the availability of maternity leave, which guarantees the stability of the former working position for a woman after childbearing (Sinyavskaya and Billingsley, 2013).

First, I select those who have no children and run the basic models for the three sub-samples: 1) for total population of young adults of age 18–34, 2) for men, and 3) for women-dependent variables including both individual- and country-level variables (specifications 1.1, 2.1, 3.1 in Table A3 in the Appendix). I then introduce interaction terms between employment dummies and EPL_dismissals and EPL_temps into the models separately for men and women (specifications 1.2, 2.2, 3.2 in Table A3 in the Appendix). In all models, permanent employment status is a reference category for comparisons.

Finally, as the main result of this paper is to interpret the significance of the main effects of temporary employment, informal work, and unemployment on planning to have the first child, we calculate the conditional effects for the interactions (Table 3). The last step is needed to interpret the main effects from the variables' interaction, which is possible when the other interacted variable equals zero (Jaccard, 2001). Thus to test the effect from job instability in countries with strict EPL (with the maximum score) and in countries with low EPL (minimum scores) we need to set the

scores to zero turn by turn.¹⁰ The minimum EPL_dismissals and EPL_temps can be observed in the U.K. with values of 1.198 and 0.375 for 2004 and 2010, respectively. The observed maximum of EPL_dismissals both in 2004 and in 2010 was in Portugal (4.417 and 4.131, respectively). The maximum of EPL_temps was in Turkey (4.875) in 2004 and in France (3.625) in 2010.

The same sequence of operations is repeated for the sample of young adults who already have at least one child, to test if employment status under different EPL country scores affects the decision to have a next child.

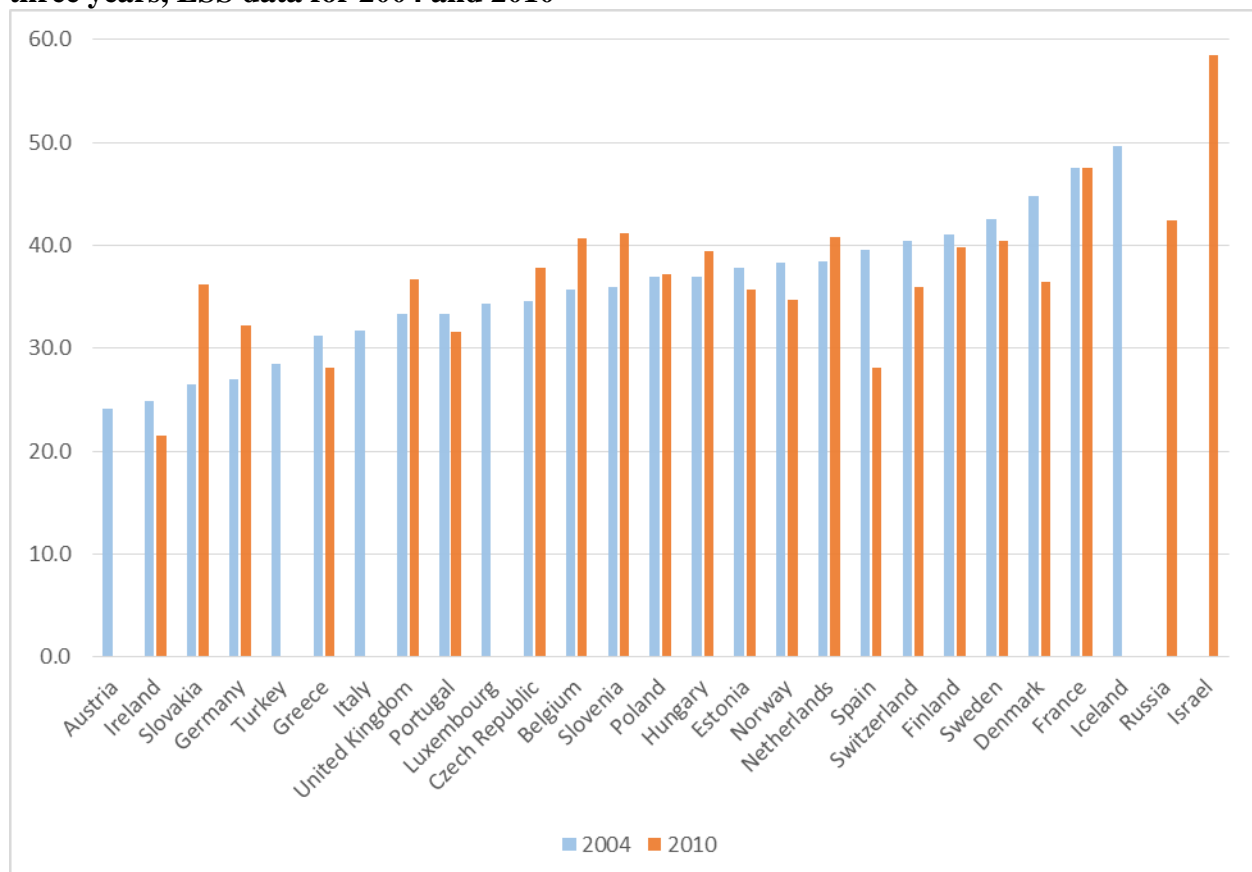
The discussion of results below starts from the description of job instability indicators and fertility intentions among young adults in the sampled European countries.

4. Discussion

The analysis showed that in 2010 from 21.5% (Ireland) to 58.5% (Israel) of young adults declared that they were planning to have a child within the next three years. Only in seven countries out of 27 was this percentage higher than 40%. Figure 3 demonstrates the differences in this share between 2004 and 2010 according to the ESS data. The increase was noticed only in Slovakia, Germany, the U.K., the Czech Republic, Belgium, Slovenia, Hungary, and the Netherlands, while in the other countries there was a decrease in the percentage of young adults who expressed the intention to have a child in the near future.

The results of the low share of fertility intentions among young Europeans as well as their decline in many other countries may be explained by increased job instability, or more specifically, the rise of temporary or informal employment, and increase of youth unemployment. Table 1 shows that in 19 out of 27 countries, temporary or informal employment or unemployment exceeded 15% of the young adult population. In some countries, the share of young adults experiencing job instability exceeds 50% (if we sum up temporary and informal employment, and unemployment).

Figure 3. Share of young adults aged 18-34 years planning to have children within the next three years, ESS data for 2004 and 2010



Source: Author's own calculations

The regression coefficients from the multilevel modeling all speak to this result of negative effects on fertility intentions from temporary employment, informal work, and unemployment both for young men and women living in Europe (Table 2). All the effects are significant and reasonably strong. I should note that the status of non-activity has the same or an even stronger negative impact on planning to have children. At the same time there is no negative influence of job instability for those young Europeans who already have at least one child and plan to have one more. This outcome is in line with studies on the probability of having a second or third child in Norway and Russia (Kravdal, 1992; Karabchuk, 2017).

Table 1. Share of temporary, informal workers and unemployed young adults

	2004			2010		
	Share of temporary workers	Share of informal workers	Share of unemployed	Share of temporary workers	Share of informal workers	Share of unemployed
Austria	11.7	3.8	8.5	Not in the sample		
Belgium	13.3	1.5	10.5	13.1	1.5	10.1
Czech Republic	17.2	0.5	7.6	16.1	0.5	10.3
Denmark	14.4	3.7	6.5	15.2	3.0	16.2
Estonia	9.0	1.6	4.5	11.0	3.4	11.6
Finland	24.7	1.0	9.5	17.8	0.0	8.5
France	no data	no data	9.2	18.6	2.0	12.2
Germany	17.7	2.0	16.7	24.3	1.9	9.4
Greece	11.8	24.9	17.6	11.7	20.1	23.0
Hungary	10.2	4.7	6.7	14.9	1.6	13.8
Iceland	21.3	17.2	2.4	Not in the sample		
Ireland	9.6	25.0	5.8	10.5	26.7	27.3
Italy	18.6	3.6	16.3	Not in the sample		
Israel	Not in the sample			13.1	26.5	10.9
Luxembourg	13.5	2.3	6.3	Not in the sample		
Netherlands	19.5	1.5	6.8	27.5	1.9	4.7
Norway	13.8	2.9	8.8	17.8	1.6	7.0
Poland	30.8	5.5	13.8	38.1	3.2	9.5
Portugal	22.2	1.4	9.7	23.8	8.1	16.7
Russia	Not in the sample			10.5	4.8	7.1
Slovakia	15.5	2.1	16.2	10.4	0.5	10.9
Slovenia	24.4	5.1	7.1	27.6	1.9	10.3
Spain	29.9	3.4	7.5	30.4	1.7	21.7
Sweden	19.0	0.6	8.7	21.2	0.5	6.7
Switzerland	9.0	1.4	5.4	10.9	0.8	5.2
Turkey	10.1	35.1	19.2	Not in the sample		
United Kingdom	9.9	8.6	9.2	9.5	7.3	9.1

Source: Author's own calculations.

*grey color represents a more than 15% share

The results allow us to confirm hypothesis H1 on the negative impact of job instability on the fertility intentions of young adults in Europe for the first child. The conclusion does not

contradict previous studies on the negative effects of job instability in the separate country cases of Germany, Austria, Italy, Spain, and Russia (De la Rica, 2005; Adsera and Menendez, 2011; Del Bono *et al.*, 2011, Modena and Sabatini, 2012; Auer and Danzer, 2016; Karabchuk and Selezneva, 2017).

Table 2. Regression coefficients from multilevel modelling without EPL interaction on planning to have children within the next three years for young adults aged 18-34: (using merged 2004 and 2010 ESS data for employment status)

	Having no children			Having at least one child		
	Total	Men	Women	Total	Men	Women
Temporary work	-0.158***	-0.134*	-0.171**	0.138*	0.200*	0.0918
Informal work	-0.260***	-0.257**	-0.268**	0.00889	0.111	-0.143
Self-employment	0.139*	0.140*	0.125	0.0528	0.172*	-0.159
Unemployment	-0.271***	-0.339***	-0.176*	0.0165	-0.0272	0.0287
Non-activity	-0.819***	-0.860***	-0.767***	0.0854	0.0325	0.0708

Source: Author's own calculations; see complete tables with all control variables in the Appendix Table A3 and Table A4.

Turning to the multilevel modeling estimation of conditional effects for the EPL effects in respect of employment status one can see from Table 3 that there is almost no significant correlation coefficient between EPL and plans to have children. In other words, EPL does not have a significant effect for those young people who have permanent or temporary contracts or are unemployed. However, the EPL on temporary work has a slightly negative impact on informally employed women for the first child and on informally employed men for the next child. Other than that, there is no significant relationship between EPL on the country level and on individual childbirth planning.

This outcome allows us to reject hypothesis H2 regarding EPL's macro-level effect on the individual's fertility intentions. It would be fair to say that the estimated models failed to disclose any significant effect of the proxy for family policies as well, which was measured by the number of weeks of paid maternity leave at the country level.

This allows us to conclude that the ESS data on fertility intentions among young adults aged 18-34 do not show any significant relationship with the institutional characteristics of the countries (see Tables A3 and A4). The only significant country-level characteristic that demonstrates significant correlation is the Human Development Index, and only for those who are planning a next child.

Table 3. Conditional effects from multilevel modelling on planning to have a child within the next three years for young adults aged 18-34 (merged 2004 and 2010 ESS data)

	Having no children		Having at least one child	
	EPL dismissals	EPL temporary	EPL dismissals	EPL temporary
<i>For total population</i>				
Permanent employment	0.0875	0.0504	-0.0483	-0.0108
Temporary work	0.114	0.0765	-0.0126	-0.0892
Informal work	0.145	0.0440	-0.0108	-0.181*
Unemployment	-0.00963	0.0129	-0.0486	0.0537
<i>For males</i>				
Permanent employment	0.0644	0.691	-0.0227	-0.0664
Temporary work	0.0916	0.0896	-0.104	-0.143
Informal work	0.148	0.175	0.0591	-0.288*
Unemployment	-0.0304	0.0167	-0.0789	0.0603

<i>For females</i>				
Permanent employment	0.114	0.0188	-0.0688	0.0154
Temporary work	0.137	0.0514	0.0590	-0.0861
Informal work	0.296	-0.230*	-0.103	-.0110
Unemployment	-0.00216	-0.00585	-0.00626	0.00662

Source: Author's own calculations

Tables 4 and 5 relate to the hypotheses H3a and H3b on the mediation effect of EPL between employment status and fertility intentions among young adults. Turning to the discussion of the main outcome we can answer the research question. The results are rather unexpected and contradict our theoretical assumptions.

First, the estimated conditional effects on planning a first child do not speak to the significant negative effect of temporary and informal employment in the countries with high rates of EPL. The results are the same both for males and females. However, the signs for the coefficients are negative: they are all non-significant. In other words, we did not find a significantly stronger negative impact from temporary or informal employment on fertility intentions in the countries with strict labor market legislation (when both EPL dismissals and EPL on temporary work are maximized).

Unemployment in the countries with strict EPL on dismissals and maximum or minimum restrictions on use of temporary work shows significant and rather high negative impacts on child planning. It means that young adults without jobs in countries with high EPL rates on dismissals will be less likely to plan their first children in the next three years.

These results coincide with previous findings on moderating EPL's role in the effects of unemployment and insecure jobs on well-being and health for European countries (Vossemer *et al.*, 2017). Vossemer *et al.* (2017) used the same ESS data for 26 countries and showed negative effect of unemployment on well-being and health for those countries with high rates of EPL on dismissals even when the EPL on temporary work is minimal. Indeed, strong restrictions on firing core workers (high insider protection) might make it difficult for young adults to escape from unemployment as fresh graduates are the most vulnerable group in the labor market. These observable barriers from unemployment might prevent younger generations from planning children. At the same time, the effects of unemployment vanish for women if we estimate them separately by gender.

The most interesting results come from countries with minimum EPL restrictions on using temporary work and with minimum EPL on dismissals (the most liberal EPL). Contrary to our assumptions, the estimations' outcomes demonstrate that young people employed on temporary contracts or having no contracts are less likely to plan for a first child. This is especially true for informally employed men. Interestingly informal employment for women has a negative impact on first-child planning only in countries where use of temporary contracts is highly restricted but core workers are not well protected (EPL on dismissals is low). These results are opposite to hypotheses H3a and H3b. The analysis did not confirm that under strict EPL young people with insecure jobs had significantly less chance to plan their first child than in countries with flexible labor market legislation. By contrast, in countries with minimum EPL, job instability has a strong negative impact on first-child planning.

Second, the estimation of the conditional effects for the interactions between EPL indices and employment type in the multilevel modeling of fertility intentions shows no significant effects of job instability for those who already have at least one child (Table 5). This means that job instability does not have any impact on planning a next child either in countries with liberal EPL or in countries with strict EPL. Most likely, another factor rather than employment status affects decisions to have one more child. For example, the coefficient of education becomes larger in comparison with first-child planning or having good health, which becomes significant with a larger coefficient, especially for women.

Table 4. Conditional effects from multilevel modelling on planning to have a child within the next three years for young adults aged 18-34 *having NO children* (merged 2004 and 2010 ESS data)

	Conditional effects (for interaction)			
	EPL_D – min	EPL_D – max	EPL_D – max	EPL_D – min
	EPL_T – min	EPL_T – max	EPL_T – min	EPL_T – max
<i>For total population</i>				
Temporary work	-0.237*	-0.0338	-0.151	-0.120
Informal work	-0.313*	-0.158	-0.129	-0.342
Self-employment	0.186	0.0277	0.188	0.0260
Unemployment	-0.107	-0.588**	-0.419*	-0.275
Non-activity	-0.645***	-1.162***	-0.836***	-0.970***
<i>For males</i>				
Temporary work	-0.205	-0.112	-0.0250	-0.117
Informal work	-0.523**	-0.0470	0.221	-0.254
Self-employment	0.243	0.0833	-0.0511	0.109
Unemployment	-0.158	-0.394	-0.699**	-0.463
Non-activity	-0.677***	-1.218***	-1.262***	-0.720***
<i>For females</i>				
Temporary work	-0.255	-0.0322	-0.179	-0.108
Informal work	-0.124	-0.656	0.463	-1.243**
Self-employment	0.0704	0.179	0.505	-0.255
Unemployment	-0.00305	-0.487	-0.376	-0.114
Non-activity	-0.606***	-1.062***	-0.907***	-0.761***

Source: Author's own calculations

At first glance it might seem that the results are not in keeping with previous studies that show a negative unemployment effect for white-collar female employees in Austria on further childbirth (Del Bono *et al.*, 2011), or with fixed-term contract effects on native German women who tend to postpone first childbirth and reduce the number of children (Auer and Danzer, 2016), or with marriage delays and childbirth postponement for men employed in non-regular jobs in Japan (Piotrowski *et al.*, 2015); or with precarious work roles that create reproductive insecurity in Australia (Sharni and Dale, 2015). However, this is not the case as it would be incorrect to directly compare the results of multilevel modeling aimed at disclosing the cross-country moderating effects of EPL on the relationship between job instability and fertility intentions, and the previous studies of single country cases for non-regular job holders and their life course analysis of marriage and childbirth. Moreover, in general, the negative impact of job instability (temporary and informal employment, and unemployment) on planning first children at the individual level was confirmed for Europe (see hypothesis H1a). At the same time, the study does not provide evidence for significant differences across European countries on the relationship between job instability and fertility intentions that could be explained by the EPL.

Table 5. Conditional effects from multilevel modelling on planning to have a child within the next three years for young adults aged 18-34 having *at least one child* (merged 2004 and 2010 ESS data)

	Conditional effects (for interaction)			
	EPL_D – min	EPL_D – max	EPL_D – max	EPL_D – min
	EPL_T – min	EPL_T – max	EPL_T – min	EPL_T – max
<i>For total population</i>				
Temporary work	0.217	-0.0208	0.332	-0.136
Informal work	0.212	-0.433	0.333	-0.554
Self-employment	-0.0117	0.155	0.118	0.0249
Unemployment	-0.0868	0.202	-0.0878	0.204
Non-activity	-0.0123	0.259	0.251	-0.00392
<i>For males</i>				
Temporary work	0.429	-0.178	0.167	0.0840
Informal work	0.403	-0.331	0.666	-0.594
Self-employment	0.0446	0.383	0.261	0.166
Unemployment	-0.183	0.206	-0.364	0.388
Non-activity	-0.564*	1.361*	1.028*	-0.232
<i>For females</i>				
Temporary work	0.0872	0.0418	0.499	-0.370
Informal work	0.0223	-0.651	-0.0888	-0.540
Self-employment	-0.0344	-0.407	0.0333	-0.475
Unemployment	-0.0388	0.123	0.162	-0.0785
Non-activity	-0.00259	0.194	0.213	-0.0215

Source: Author's own calculations

5. Conclusions

The paper contributes to ongoing academic and practical debates on fertility determinants by emphasizing job stability impacts through the labor legislation of the country. The research adds to the literature on family economics, family sociology, labor economics, economic sociology, and demography. The outcomes could be used as policy recommendations concerning fertility increases among young adults.

Apart from the confirmed significant negative impact of job instability on childbirth planning for young adults in Europe, the results proved to be unexpected and controversial in terms of the theoretical assumptions made concerning EPL's moderating effects. First, multilevel modeling estimations did not disclose any significant EPL effect on fertility intentions among young adults. Only high rates of EPL for temporary work have a negative influence on child planning for informal workers. This is in line with general trends in deregulation of the labor market concerning the use of temporary contracts in many European countries, which occurred within the last ten years (see more on the EPL gap in Barbieri and Cutuli, 2017).

Second, the test of the EPL country-level moderation effect on job instability and fertility intentions among young adults did not confirm all of the initial hypotheses. In countries with strict EPL on dismissals and EPL on temporary work, insecure jobs do not have any significant impact on planning a first or next child. At the same time, unemployment, an extreme type of instability, has a significant negative effect on fertility intentions in such countries although it appears to be non-significant in countries with liberal EPL concerning both dismissals and temporary work. This result is consistent with studies on EPL's gap-moderating effects on unemployment and well-being, and unemployment and health in Europe (Vossemer *et al.*, 2017). Indeed, overregulated labor markets can cause unemployment traps especially for young adults that leads to postponement of marriage and childbirth. Despite our predictions, fertility intentions are lower among young temporary workers and informal employees in countries with minimum EPL restrictions.

Finally, we can conclude that we did not obtain definite and convincing evidence that extremely strict labor market regulations cause a decrease in the probability of having a child within next three years. To the contrary, this paper provides grounds for future research by raising more questions about this topic. A following step would be to estimate the correlation between fertility intentions and job instability separately for young adults and older generations, compare the results, and then complete these estimations for each country on a national level. Obtaining these quantitative effects for each country and for the EPL indexes would allow better interpretations of the outcomes obtained to be made.

The importance of research in the area of fertility and childbirth planning is driven by the need for supportive family policies as their absence leads to increases in postponing childbirth and thus childlessness (Mills *et al.*, 2011). Unfortunately, previous studies indicate that, in general, women overestimate their own reproductive capacity and underestimate the risk of future childlessness caused by the continuous postponement of pregnancies (Birch Petersen *et al.*, 2015).

This raises the question of the type of policy recommendations that should be discussed. Should governments create more better jobs for youth or concentrate more on family support policies for young families? To create more jobs in the labor market, a deregulation strategy on insiders' protection must be applied. So far, the liberation of EPL concerns mainly EPL on use of temporary workers, which has not brought the desired results in fighting unemployment or reducing fixed-term contracts (Barbieri and Cutuli, 2017; Vossemer *et al.*, 2017).

That is why special government family policies are highly important and desirable. Despite obtaining non-significant coefficients of the country-level variable of the number of weeks of paid maternity leave, other recent studies have revealed the positive role of policies in reducing the incompatibility between motherhood and careers (Gornick *et al.*, 1998; Engelhardt and Prskawetz, 2004; Sinyavskaya and Billingsley, 2013; Billingsley and Ferranini, 2014). These policies have increased employment flexibility and reduced the opportunity costs of children by making available part-time work, child benefits, parental leave, and subsidized childcare (Neyer, 2003; Del Boca *et al.*, 2005). The main point for social policy recommendations would not lie in generally deregulating EPL for primary workers but in creating more opportunities for mothers to combine families and work. Flexible labor legislation and widespread part-time employment allow females to realize themselves both as mothers at home and as employees at work (Adsera, 2005).

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Endnotes

¹ Unfortunately OECD open-access data does not allow the possibility of disaggregating the age group of 15–34, but only the 15–24 and 25–54-year-old groups.

² The ESS is a household survey, conducted every two years in almost all European countries. The questionnaire consists of a collection of questions that can be classified into two main parts—a core section (repeated regularly) and a rotating section. Sampling on the ESS is guided by the following key principals: samples must be representative of all persons aged 15 and over (no upper age limit) resident within private households in each country, regardless of their nationality, citizenship or language; individuals are selected by strict random probability methods at every stage; sampling frames of individuals, households, and addresses may be used; all countries provide minimum “effective achieved sample size” of 1,500 or 800 for countries with populations of less than two million after discounting for design effects; quota sampling is not permitted at any stage; substitution of non-responding households or individuals (whether “refusals,” “non-contacts,” or “ineligibles”) is not permitted at any stage. More information is available from <http://www.europeansocialsurvey.org/methodology/>

³ ESS Round 2: European Social Survey Round 5 Data (2004). ESS Round 5: European Social Survey Round 5 Data (2010). Norwegian Social Science Data Services, Norway – Data Archive and Distributor of ESS data.

⁴ I also estimated the same models for two years separately at the first stage of the analysis; results proved to be the same and consistent with the merged sample. Having two rounds together for empirical analysis allowed us to perform a robustness check, and to control for changes in EPL between 2004 and 2010.

⁵ A person is designated as having **permanent employment** if he/she had a job within the past week, was not self-employed, and had a working contract of unlimited duration. A person is identified as a **temporary employee** if he/she had a job within the previous week, was not self-employed, and had a working contract with limited duration. An **informal worker** is identified as a person who declared he/she had a job within the previous week but was employed without any written contract. **Self-employed** are those who answered that they had a paid job within the last seven days but were working as self-employed or for their own family business. **Unemployed** are those who did not have any paid job within the last seven days but were actively searching. The **non-inactive** category contains those who did not have a job within the last week and were not looking for one (see Appendix, Table A1).

⁶ However, separate testing of models with the income variable included was undertaken. The testing effects from employment status remained the same.

⁷ The items for *EPL_dismissals* include 1) notification procedures, 2) delay involved before notice can start, 3) length of notice period at nine months tenure, 4) length of notice period at four years tenure, 5) length of the notice period at 20 years tenure, 6) severance pay at nine months tenure, 7) severance pay at four years tenure, and 8) severance pay at 20 years tenure. We did not obtain an EPL index on dismissals that included regulation of collective dismissals because the focus of the paper is individual subjective well-being and individual employment practices; moreover, collective dismissals are very rare. The regulation process of individual hiring and firing is the main issue in this study.

⁸ The items for *EPL_temps* include 1) valid cases for use of fixed-term contracts, 2) maximum number of successive fixed-term contracts, 3) maximum accumulated duration of successive fixed-term contracts, 4) types of work for which

temporary work agency (TWA) employment is legal, 5) restrictions on the number of renewals of TWA assignments, and 6) maximum accumulated duration of TWA assignments.

⁹ We have chosen HDI because it reflects not only the material wealth of the country but also the level of development of human capital. This aspect is especially relevant in respect to research focused on labor markets. The HDI increases the individual levels of happiness and life satisfaction.

¹⁰ To estimate the conditional effects for countries with the highest and lowest EPL rates, I calculated the models, first, with the respective minimum of EPL_dismissals and EPL_temps equal to zero and, then with the respective maximum of EPL_dismissals and EPL_temps equal to zero; finally, these were calculated for situations where EPL_dismissals were very liberal (minimum set to zero) but EPL_temps were very rigid (maximum equal to zero), and vice versa. I could thus interpret the size, significance, and signs of the main effects for temporary and informal employment on fertility intentions of young adults for countries with high/low EPL on dismissals and high/low EPL on temporary contracts.

Appendices

Table A1. Description of the variables and descriptive statistics

<i>Individual level variables</i>		<i>N Obs.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min.</i>	<i>Max.</i>
Planning to have a child	0 = not planning to have a child within next three years, 1 = planning to have a child within next three years	20950	.3452983	.4754768	0	1
Being male	1 = male, 0 = female	20950	.4816286	.4996732	0	1
Having university diploma	1 = having a university diploma, 0 = no university diploma	20950	.2612996	.4393523	0	1
Having a partner/being married	1 = having a spouse/partner, 0 = not having a spouse/partner	20950	.4221173	.4939077	0	1
Having good health	1 = having good or very good health, 0 = not having good health	20950	.8413844	.3653252	0	1
Being religious	0 = not religious at all – 10 = very religious	20950	4.181094	2.971267	0	10
Living in a city	1 = living in big or small city, 0 = living in countryside or village	20950	.6823153	.4655862	0	1
Importance of job security when choosing a job	1 = Not important at all – 5 = Very important	20950	4.377237	.7585479	1	5
Importance of combining work and family when choosing a job	1 = Not important at all – 5 = Very important	20950	4.149719	.8586393	1	5
Permanent employment	1 = having unlimited contract, 0 = not having unlimited contract	20950	0.353953	0.478205	0	1
Temporary work	1 = having fixed-term contract, 0 = not having fixed-term contract	20950	.0994771	.2993082	0	1
Informal work	1 = having no contract, 0 = not having no contract	20950	.036246	.1869058	0	1
Self-employment	1 = being self-employed, 0 = not being self-employed	20950	.0571937	.2322175	0	1
Unemployment	1 = being unemployed, 0 = not being unemployed	20950	.0734085	.2608115	0	1
Non-activity	1 = being inactive, 0 = not being inactive	20950	.3714373	.4831995	0	1
<i>Country-level variables</i>		<i>N Obs.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min.</i>	<i>Max.</i>
HDI	Human Development Index	20950	.8564137	.0484537	.687	.939
N_weeks_mat	Number of weeks of paid maternity leave	20950	20.96556	11.95028	6.40	72
EPL_dismissals	OECD indicator: EPL on dismissals of regular workers. Varies from 0 (minimum) to 6 (maximum).	20950	2.388843	.6472246	1.198	4.417
EPL_temps	OECD indicator: EPL on usage of temporary employees. Varies from 0 (minimum) to 6 (maximum).	20950	1.808034	1.086415	.375	4.875

Source: own illustration

Table A2. Descriptive statistics on countries

	2004				2010			
	EPL_dis missals	EPL_temps	HDI	N_weeks_ maternity	EPL_dis missals	EPL_temps	HDI	N_weeks_ maternity
Austria	2.37	1.31	0.85		Not in the sample			
Belgium	1.81	2.38	0.87		2	2.38	0.88	
Czech Republic	3.31	0.5	0.85		3.05	1.31	0.86	
Denmark	2.14	1.38	0.89		2.14	1.38	0.9	
Estonia	2.74	1.88	0.82		1.81	1.88	0.83	
Finland	2.17	1.56	0.87		2.17	1.56	0.88	
France	2.47	3.63	0.87		2.39	3.63	0.88	
Germany	2.87	1	0.89		2.87	1	0.9	
Greece	2.8	2.75	0.85		2.8	2.75	0.86	
Hungary	2	1.13	0.81		2	1.13	0.82	
Iceland	1.73	0.63	0.89		Not in the sample			
Ireland	1.44	0.63	0.89		1.27	0.63	0.9	
Israel	Not in the sample				2.04	0.88	0.88	
Italy	2.76	2	0.86		Not in the sample			
Luxembourg	2.25	3.75	0.88		Not in the sample			
Netherlands	2.89	0.94	0.89		2.82	0.94	0.9	
Norway	2.33	2.75	0.94		2.33	3	0.94	
Poland	2.23	2.88	0.8		2.23	2.88	0.83	
Portugal	4.42	2.56	0.79		4.13	1.94	0.82	
Russia	Not in the sample				3.06	1.13	0.77	
Slovakia	2.22	0.63	0.8		2.22	1.63	0.83	
Slovenia	2.65	1.81	0.86		2.65	1.81	0.87	
Spain	2.36	3.25	0.84		2.36	3	0.86	
Sweden	2.61	1.44	0.89		2.61	0.81	0.9	
Switzerland	1.6	1.13	0.9		1.6	1.13	0.92	
Turkey	2.31	4.88	0.69		Not in the sample			
United Kingdom	1.2	0.38	0.89		1.2	0.38	0.9	

Source: OECD (2013)

Table A3. Regression coefficients from multilevel modelling on planning to have children within next three years for young adults aged 18–34: total sample, men and women, having NO children (using merged 2004 and 2010 ESS data)

	Young adults who have no children					
	Total		Men		Women	
	T.1	T.2	M1	M2	F1	F2
Being male	-0.222***	-0.227***				
Having university diploma	0.272***	0.274***	0.236***	0.238***	0.313***	0.317***
Having a partner/being married	1.145***	1.145***	1.250***	1.249***	1.058***	1.060***
Having good health	-0.0811*	-0.0777*	-0.0940	-0.0914	-0.0866	-0.0816
Being religious	0.0371***	0.0371***	0.0415***	0.0414***	0.0311***	0.0314***
Living in a city	0.0204	0.0181	0.0451	0.0407	0.00519	0.00435
Importance of job security when choosing a job	-0.00929	-0.00860	-0.00344	-0.00224	-0.0171	-0.0156
Importance of combining work and family when choosing a job	0.165***	0.163***	0.171***	0.170***	0.154***	0.152***
HDI	0.439	0.359	0.266	0.418	0.536	0.341
N_weeks_mat_leave	0.00481	0.00477	0.00163	0.00195	0.00667	0.00656
Temporary work	-0.158***	-0.279	-0.134*	-0.245	-0.171**	-0.295
Informal work	-0.260***	-0.379	-0.257**	-0.662	-0.268**	-0.249
Self-employment	0.139*	0.199	0.140*	0.307	0.125	-0.0641
Unemployment	-0.271***	0.0238	-0.339***	-0.0247	-0.176*	0.145
Non-activity	-0.819***	-0.547***	-0.860***	-0.616**	-0.767***	-0.481**
EPL_dismissals	0.0682	0.0875	0.0518	0.0644	0.0851	0.114
EPL_temps	0.0248	0.0504	0.0384	0.0691	-0.00239	0.0188
Temp.work*EPL_dis		0.0268		0.0271		0.0235
Temp.work*EPL_temp		0.0261		0.0205		0.0326
Inf.work*EPL_dismiss		0.0571		0.0833		0.182
Inf.work*EPL_temps		-0.00635		0.106		-0.249*
Self.empl*EPL_dism		0.000508		-0.0417		0.135
Self.empl*EPL_temps		-0.0356		-0.0356		-0.0723
Unempl*EPL_dismiss		-0.0972		-0.0948		-0.116
Unempl*EPL_temps		-0.0375		-0.0524		-0.0246
Nonactivity*EPL_dismiss		-0.0595		-0.0135		-0.0935
Nonactivity*EPL_temps		-0.0723*		-0.120*		-0.0346
cons	-1.802	-1.818	-1.870	-2.092	-1.818	-1.756
var(_cons[cntry])_cons	0.0471**	0.0463**	0.0643**	0.0661**	0.0317**	0.0297**
N	13570	13570	7244	7244	6326	6326
aic	13032.0	13038.4	6481.5	6485.1	6588.0	6596.4
bic	13174.8	13256.3	6605.5	6678.0	6709.5	6785.5

Notes. *t* statistics in parentheses
 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A4. Regression coefficients from multilevel modelling on planning to have children within next three years for young adults aged 18–34: total sample, men and women, having at least one child (using merged 2004 and 2010 ESS data)

	Young adults who have at least one child					
	Total		Men		Women	
	T.1	T.2	M1	M2	F1	F2
Being male	0.0887*	0.0910*				
Having university diploma	0.326***	0.323***	0.318***	0.309***	0.350***	0.350***
Having a partner/being married	0.632***	0.630***	0.876***	0.870***	0.624***	0.623***
Having good health	0.144**	0.144**	0.0831	0.0875	0.172**	0.172**
Being religious	0.0219***	0.0213***	0.0429***	0.0410***	0.00875	0.00866
Living in a city	0.102**	0.103**	0.0675	0.0839	0.127**	0.129**
Importance of job security when choosing a job	-0.0238	-0.0225	-0.0511	-0.0445	-0.00677	-0.00659
Importance of combining work and family when choosing a job	0.0309	0.0302	0.0578	0.0545	0.00534	0.00462
HDI	1.914*	1.821*	1.122	0.986	2.132*	2.178*
N_weeks_mat_leave	-0.00347	-0.00364	-0.00774	-0.00781	-0.00185	-0.00175
Temporary work	0.138*	0.204	0.200*	0.555	0.0918	-0.0279
Informal work	0.00889	0.231	0.111	0.388	-0.143	0.110
Self-employment	0.0528	-0.0630	0.172*	-0.0461	-0.159	-0.0229
Unemployment	0.0165	-0.111	-0.0272	-0.163	0.0287	-0.110
Non-activity	0.0854	-0.111	0.0325	-1.185*	0.0708	-0.0814
EPL_dismissals	-0.0170	-0.0483	0.0128	-0.0227	-0.0318	-0.0688
EPL_temps	-0.0156	-0.0108	-0.0654	-0.0664	-0.00168	0.0154
Temp.work*EPL_dis		0.0357		-0.0813		0.128
Temp.work*EPL_temp		-0.0785		-0.0767		-0.102
Inf.work*EPL_dismis		0.0375		0.0818		-0.0345
Inf.work*EPL_temps		-0.170		-0.222		-0.125
Self.empl*EPL_dism		0.0403		0.0672		0.0210
Self.empl*EPL_temps		0.00814		0.0271		-0.0979
Unempl*EPL_dismis		-0.000322		-0.0563		0.0625
Unempl*EPL_temps		0.0645		0.127		-0.00880
Nonactivity*EPL_dismis		0.0818		0.495*		0.0671
Nonactivity*EPL_temps		0.00185		0.0740		-0.00420
cons	-2.794**	-2.645**	-2.180	-1.989	-2.922**	-2.903**
var (cons[cntry])_cons	0.0234*	0.0225*	0.0318	0.0297	0.0178	0.0180
N	6035	6035	2034	2034	4001	4001
aic	7713.5	7723.1	2707.3	2709.9	5024.3	5039.2
bic	7840.9	7917.5	2808.5	2867.2	5137.6	5215.5

Notes. *t* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$