

# Book of Short Papers

## SIS 2021



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# Employment Uncertainty and Fertility in Italy: The Role of Union Formation

## *Incertezza lavorativa e fecondità in Italia: il ruolo della formazione dell'unione*

Giammarco Alderotti, Valentina Tocchioni, Alessandra De Rose

**Abstract** The relationship between employment uncertainty and fertility is a prominent topic in demographic research. Evidence about Italy shows that men and women with precarious employment have fewer children and later. However, such evidence is outdated, with most recent studies based on data collected in 2009. Besides, the role of mediator that union formation may play in the relationship between employment uncertainty and fertility is largely neglected. With this work, we overcome the lack of a study with recent data about this topic for Italy, considering also union formation. Preliminary results suggest that employment uncertainty negatively affects fertility, especially among men, but when union formation is considered, the effect of employment uncertainty becomes much smaller.

**Abstract** *La relazione tra incertezza lavorativa e fecondità è un tema importante in demografia. Gli studi sull'Italia mostrano che uomini e donne con lavori precari hanno meno figli e li fanno più tardi. Tuttavia, questi studi non sono aggiornati, considerando che la maggior parte è realizzata con dati raccolti nel 2009. Inoltre, il ruolo giocato dalla formazione dell'unione all'interno della relazione tra incertezza lavorativa e fecondità è spesso trascurato. Con questo lavoro, ci proponiamo di sopperire alla mancanza di studi effettuati su dati recenti per l'Italia, tenendo conto anche dell'effetto di mediazione dell'unione. I primi risultati mostrano che l'incertezza lavorativa ha effetti negativi sulla fecondità, specie tra gli uomini, ma quando si considera anche lo stato di unione, tali effetti si riducono notevolmente.*

**Key words:** fertility, union formation, employment uncertainty, Italy

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## 1. Introduction

The relationship between employment uncertainty and fertility has become an increasingly important issue in demographic research. The notion of employment uncertainty refers to the lack of knowledge about what will happen in the labour market and the availability of a stable job or, indeed, any job to cover household expenses (Scherer 2009; Bloom 2014). Generally speaking, employment uncertainty is usually deemed to negatively impact fertility, with individuals in more precarious positions being more likely to postpone or forego parenthood (Blossfeld et al. 2006).

Theoretical premises suggest that individuals tend to postpone childbearing until more certain times, because childbearing is an irreversible event and people might wait to be sure about their income level before deciding to have a child (Ranjan 1999). Moreover, the deregulation of the labour market that started during the 1980s generated unprecedented levels of employment uncertainty, which became an inherent part of adults' life-courses in Western countries (Mills and Blossfeld 2013).

Empirical studies usually operationalise the forces of employment uncertainty through objective indicators of individuals' labour market situation, such as holding a temporary contract (e.g., Kreyenfeld et al. 2012). More specifically, employment uncertainty may stem from time-limited working contracts, because they are often connected to wage penalties and low employment protection (Schmitt 2012), low levels of labour market integration and little control over working hours (Pirani 2017).

The direction and magnitude of the relationship between employment uncertainty and fertility are still debated in the literature, because empirical evidence is highly context-dependent (see Alderotti et al. 2021 for a review). Whilst some studies did not identify any relationship (de Lange et al. 2014), others found a positive effect of employment uncertainty on fertility, mostly limited to countries with liberal labour markets (e.g., the United Kingdom). On the contrary, studies about Southern Europe point out that employment uncertainty is strongly detrimental for fertility (e.g. Barbieri et al. 2016).

In the Southern European context, Italy represents an intriguing case study because of the quick rise of uncertainty levels in the labour market and for the peculiarity of its family formation dynamics. From 1996 to 2016, the share of temporary employment among dependent workers grew from 7.0% to 14.0%, whereas the EU-28 average slightly moved from 11.5% to 14.0% (OECD 2021). Italy is also well-known for its *latest-late* transition to adulthood (Billari et al. 2002). With respect to their European counterparts, young Italians are among the oldest ones to complete their education, to enter the labour market, to leave the parental family, to start a union and to have a child – women's mean age at first birth is 31.3 years old in 2019 (De Rose et al. 2008; Istat 2020). This might (also) be due to the fact that Southern European youth and their families attach strong importance to employment stability as a prerequisite to start a family (Vignoli et al. 2020a).

A number of studies about the micro-level relationship between employment uncertainty and fertility in Italy are available; however, such evidence suffers from two main limitations. First, the timing: most recent studies are based on the survey

“Family and Social Subjects”, released by the Italian National Statistical Institute (Istat), which includes data collected in 2009 (e.g., Vignoli et al. 2020b; Busetta et al. 2019). Such studies are clearly outdated. The lack of recent evidence is particularly problematic in light of the extraordinary economic events that have taken place in the country after 2009 such as the Great Recession, started already in 2008, but which affected European countries most severely in the following years, or the crisis of the sovereign debt of 2012, which introduced further economic instability in Italy. Also, a substantial labour market reform occurred in 2015 – the so-called “Jobs Act” – which has essentially reduced the employment protection for large firm employees and left largely unchanged that for small-firm ones (De Paola and Scoppa 2020). The second limitation is that virtually no study about the relationship between employment uncertainty and fertility considers explicitly the role played by union status. However, fertility does not occur in isolation, but within relationships, especially in a country like Italy where *out-of-union* births are very scant. In Italy the share of children born outside marriage has increased over the last years (from about 20% in 2008 to about 34% in 2019; Istat 2020), but children born within marriages are still the large majority, and such share is larger than in most other European countries. Uncertain employment conditions might first jeopardise one’s chance to enter a stable union, and then affect childbearing. We advocate that, in order to have a comprehensive picture of how employment uncertainty affects fertility dynamics, union formation processes must be taken into account. A handful of studies faced this issue by analysing and modelling jointly the processes of union formation and transition to parenthood (e.g., Trimarchi and Van Bavel 2017), and proved that analysing the uncertainty-fertility link disregarding union status leads to incorrect results.

The aim of this work is twofold: first, by applying event history analysis we provide a timely evidence of how employment uncertainty relates to transition to parenthood by using the most up-to-date data available for Italy; second, we analyse the interrelationships between employment uncertainty, union formation and transition to parenthood, by looking at how the link between employment uncertainty and fertility changes when union status is included in our analysis.

## 2. Data and Methods

We use data from the 2016 survey of Household Multipurpose Survey Family, Social Subjects and Life Cycle (FSS), released by ISTAT. This survey includes detailed retrospective information on men’s and women’s partnership, employment and fertility histories, on a monthly basis. Our sample is formed by 5,609 men and 5,600 women aged 18-49 at interview (we excluded individuals with missing information on their childbearing or union history).

We employ event history analysis to study the transition to parenthood among childless men and women. We run gender-specific Cox models in order to investigate the relationship between employment uncertainty and fertility among men and women, and the role of mediator played by union formation. Since we are dealing with union formation and first childbirth, it is important to account for potential

pregnancies outside union, because some marriages and consensual unions might be a consequence of conceptions. Accordingly, in order to minimise possible reversed causation, the timing is specified as a transition to first-child conception. Individuals enter at risk of having a first child at age 16 and exit from the study at first child's conception turned into a live birth, at the interview date or at the age of 49, whichever occurred first. The main explanatory variable is the employment condition together with the type of job contract. Information on employment history allows to distinguish between unlimited-time contracts, time-limited contracts, self-employment and non-employment. The 'time-limited contracts' category includes both fixed-term jobs and 'atypical work', which identify the most precarious forms of employment (e.g., jobs on call, seasonal work). Unfortunately, it is not possible to distinguish between unemployed and inactive individuals. The mediation variable is the union status (single, cohabiting or married). Other control variables include macro-area of residence, time-varying educational level and calendar period.

### 3. Results

Table 1 shows model results on the transition to parenthood for men and women, separately, with and without controlling for union status. For the sake of brevity, we report information about the employment variable only (full models available upon request). The results clearly confirm that employment uncertainty is generally detrimental for the transition to parenthood in Italy, especially among men.

When not controlling for union status, men with time-limited contract or employed in atypical jobs have a hazard rate of conceiving a first child that is 27% lower than that of men with unlimited-time contract. Non-employment is even more detrimental for men's transition to fatherhood, with a relative risk reduced by 57%. Among women, time-limited contract only is related to a lower hazard of transition to motherhood, with a relative risk reduced by 13%. Self-employed women and especially non-employed women have a similar hazard rate of conceiving a first child as employed women (hazard ratios are not significant and very close to one).

Once introduced union status in the model, all hazard ratios become bigger (except one) and most of them lose significance, thus showing the mediating role played by union status in the relationship between employment uncertainty and fertility. More precisely, time-limited contract is not significantly associated to a lower risk of transition to parenthood both among men and women, while non-employment still reduces the risk of conceiving a first child among men, but to a smaller extent. On the other hand, being not-employed slightly increases by 6% the risk of conceiving a first child among women. Interestingly, self-employment is significantly associated to the lowest risk of conceiving a first child among women when union status is taken into account, thus suggesting that those women could be the ones who have more difficulties in conciliating their professional careers with childbearing.

**Table 1:** Cox model on the transition to parenthood. Gender-specific models with and without control for union status. Hazard ratios.

<i>Employment status</i>	<i>Without control for union</i>		<i>With control for union</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
Ref.: unlimited-time contract				
time-limited contract	0.73 (<0.01)	0.87 (0.04)	0.90 (0.17)	0.96 (0.55)
self-employed	0.93 (0.15)	0.91 (0.20)	0.98 (0.78)	0.87 (0.04)
not employed	0.43 (<0.01)	0.99 (0.85)	0.63 (<0.01)	1.06 (0.114)

Note: p-value in brackets. Source: authors' elaboration on 2016 FSS data.

The models include control for macro-area of residence, educational level, calendar year, and (only in the second panel) union status.

#### 4. Discussion

We used the most recent data available for Italy to study the relationship between employment uncertainty and fertility, with a special focus on the role played by union status. These first results clearly indicate that considering union formation is fundamental when studying the relationship between employment uncertainty and fertility. Having an uncertain employment status seems to have a negative effect on childbearing among men and women, but once controlled for union status this effect markedly reduces: as a consequence, we may hypothesize that, in Italy, employment uncertainty has a detrimental effect on union status, whilst the direct effect of employment uncertainty on fertility is virtually null, and mainly restricted to men's non-employment.

These results clearly suggest – in line with our expectations – that uncertainty may select individuals into union before directly affecting childbearing. We claim that a deeper analysis of the mediating role of union status needs to be carried out for the Italian context. Accordingly, our next step will be performing a mediation analysis (e.g. Breen et al. 2013; Vignoli et al. 2020c) to assess the extent to which the effect of employment uncertainty on fertility is mediated by union formation processes, and if and to what extent a direct effect between employment uncertainty and fertility persists.

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