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births

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# **Unemployment delays parenthood but not for all. Life stage and educational differences in the effects of employment uncertainty on first births**

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## **Abstract**

This study investigates how employment uncertainty is associated with the transition to parenthood among men and women in times of increased instability in the labour market. We provide novel insights into how education and life stage might modify the link between insecure employment and fertility. We focus on a Nordic welfare state, Finland, and apply event history models to a rich register sample covering the years 1988–2009 (N=306,413). Our results suggest that a weaker labour market attachment tends to delay parenthood among both men and women, but the association is stronger for men. In most groups, the accumulation of unemployment periods is associated with a lower rate of entry into parenthood. However, among young, low-educated women, even long-term or recurring unemployment seems to promote first childbearing, and the generally negative association between unemployment and entry into parenthood is relatively weak among young, low-educated men. It appears that the effect of unemployment and employment insecurity is largely mediated by the low income of unemployed persons. Overall, the findings suggest that in a modern, gender-egalitarian welfare society, better employment prospects promote transition to parenthood in a very similar fashion among men and women, but the effects are strongly modified by education and life course stage.

Keywords: entry into parenthood, unemployment, employment uncertainty, socioeconomic resources, educational differences, men, women

## **1 Introduction**

Finishing education and securing a foothold in the labour market are important milestones in the transition to adulthood, and they tend to influence decisions regarding family formation. Recent studies on economic downturns and fertility have suggested that poor employment prospects and a lack of economic resources induce postponement of childbearing (Adsera 2011; Sobotka et al. 2011; Goldstein et al. 2013). One could expect that in contemporary gender-egalitarian Western societies, stable employment and higher earnings prospects encourage both men and women to have children. While previous micro-level research has rather uniformly shown that employment and occupational resources promote men's entry into parenthood, findings concerning women remain inconclusive. In some studies, unemployment and a weak position in the labour market have been linked to a higher likelihood of having a first child for women (Andersson 2000; Kravdal 2002; Inanc 2015), whereas others have concluded that secure employment encourages entry into motherhood (Meron et al. 2002; Pailhé & Solaz 2012) or that the association depends on the societal context (Kreyenfeld 2010; Schmitt 2012; Matysiak & Vignoli 2013).

It is possible that the mechanisms linking employment to fertility have become more diverse with the educational expansion in recent generations and with increasing uncertainties regarding the labour market. The benefits of higher education in terms of employment and earnings have become less secure, and periods of unemployment and fixed-term contracts are now increasingly common among highly educated young adults (OECD 2015). Indeed, one possible explanation for the inconclusive findings on the link between paid employment and entry into parenthood among women may be that heterogeneity in these associations is rarely considered. The few studies that have investigated educational differences in the effects of employment uncertainty among women have provided mixed results (Özcan et al. 2010; Pailhé & Solaz 2012; Schmitt 2012; Kreyenfeld & Andersson 2014; Wood & Neels 2017), and there are very few studies on men. Furthermore, the impact may depend on the stage in the life course. Frequent unemployment spells and precarious jobs characterize labour market participation among the youngest adults, and those who are currently employed may not find their situation much more secure than those without a job—regardless of educational attainment but especially among the low educated. Beyond young ages, having stable employment becomes more usual, and even short spells of unemployment may be a barrier to making long-term commitments.

This study examines the influence of insecure employment on entry into parenthood as manifested by the life courses of young men and women over the past two decades in Finland. We contribute to previous research on the fertility and employment nexus by exploring educational and life stage

differences in the relationship between employment status and transition to parenthood. We also consider the duration of unemployment: a precarious employment situation is likely to have a stronger impact on childbearing decisions if the unemployment periods are long or recurring.

Our study contributes to the discussion on whether the association between labour market attachment and entry into parenthood differs between men and women in modern welfare states such as Finland. The Nordic countries are regarded as forerunners in social and gender equality, and extensive social and family policies support the sharing of the provider and carer roles between mothers and fathers. On average, women's educational level exceeds that of men in young generations, strengthening the dual-career and dual-earner model in the family. Generous parental leave schemes and day care arrangements are aimed at facilitating the combination of paid work and family. However, although the state promotes women's employment and fathers are expected to participate in childcare, the consequences of parenthood for employment are still gendered, as women continue to bear the major share of unpaid care work (Salmi 2012; Miettinen & Rotkirch 2012).

This study uses data drawn from Finnish register sources that cover detailed life histories over several decades, with no sample bias arising from selective non-response. The rich and large-N data allow us to consider several dimensions of socioeconomic resources, such as income and employment histories. Unemployment is associated with economic insecurity, but its effect on childbearing beyond short-term financial constraints is unclear. In young adulthood, earnings from paid work may not considerably exceed income provided by unemployment and other benefits, but finding a job may be regarded as a sign of social standing, maturity, and longer-term prospects that facilitate family formation.

## **2 Theoretical background and previous research**

In addition to education, stable employment is one of the most important aspects of one's socioeconomic position. With increasing uncertainty in the labour market and severe economic downturns, it may have become even more important for both men and women to gain a foothold in the labour market before entering parenthood. It has long been assumed that the impact of employment on family formation is different for men and women, with a consistently positive impact among men. However, both theory and empirical evidence support the expectation that the roles of men and women in maintaining the family have become much more similar over the past few decades (Oppenheimer 1997; Mills & Blossfeld 2005). Women in particular have gained from

the educational expansion over the past two to three decades, increasing their economic potential and decreasing men's relative earnings contributions in families.

Conventional micro-economic theory proposes two mechanisms through which employment affects childbearing (Becker 1993). On the one hand, higher income and more secure earnings promote childbearing. On the other hand, bearing children involves relinquishing career opportunities at least temporarily; therefore, individuals with greater economic potential or better career prospects may want to postpone or reject childbearing. This latter mechanism is thought to be particularly relevant for women, who continue to take the majority of family leaves and career breaks to care for young children (*ibid.*). In that case, non-employment or unemployment could potentially induce childbearing, as it frees time and reduces the opportunity costs for women.

More recent theories on the female employment and fertility nexus stress the role of public policies and gender division regarding paid and unpaid work. These theories argue that as long as women continue to bear the dual burden of care work and breadwinning in their families, parenthood is postponed, and fertility levels will fall (McDonald 2000; Goldscheider et al. 2015). In societies in which fathers participate in childcare and that institutionally support mothers' employment with generous family leave and child care policies, the opportunity costs of women are reduced, and childbearing and employment can be more easily combined (McDonald 2000; Esping-Andersen & Billari 2015). In this case, we could expect a faster transition to first childbearing among employed women.

From a life course perspective, finding a job indicates a step towards adulthood and economic independence; consequently, stable employment should encourage family formation. In the Nordic countries and Finland in particular, women's participation in the labour market has a long tradition, and gaining education and an independent economic status have been culturally normative for women over several decades. Finding employment before having children is also advantageous because most social security and parental benefits are based on previous earnings. Establishing oneself in the labour market before becoming a parent should be particularly tempting for highly educated women who can expect to find a well-paying job and, consequently, receive higher parental benefits.

Empirical evidence regarding the impact of employment on fertility behaviours remains inconclusive. Some studies have found a positive association between unemployment or insecure employment and the transition to parenthood for women (Andersson 2000; Kravdal 2002; Schmitt

2012), while others have found a negative (Meron et al. 2002; Pailhé & Solaz 2012) or negligible association or only weak associations (Santow & Bracher 2001; Vikat 2004; Kreyenfeld 2010; Özcan et al. 2010). Moreover, some studies have reported only weakly negative or even positive associations between men's poor employment prospects or unemployment and entry into parenthood (Tölke & Diewald 2003; Özcan et al. 2010; Inanc 2015) or that the magnitude of the negative effect of men's unemployment on the timing of parenthood varies considerably between countries (Schmitt 2012).

Despite the somewhat contradictory research evidence, we expect that employment certainty is a key factor in the transition to parenthood in modern welfare societies but that the association is still gendered. Hence, our first hypotheses are that (H1a) *unemployment is negatively associated with first-birth risks* and that (H1b) *the negative association between joblessness and entry into parenthood is stronger for men than for women*.

### *2.1 Educational and life course differences in the impact of labour market position*

A limitation of many previous studies is that they do not examine whether the effect of labour market attachment, or joblessness, varies between different groups in the population. For instance, finding stable employment before entering motherhood may be more important to highly educated women who have already invested deeply in their career through long education. These women are less likely to want to undermine their future employment prospects and devalue their skills by prolonging their absence from work by parental leave, especially if they expect to be re-employed soon. In contrast, unemployment or a poorer economic situation may be considered less of an obstacle to childbearing among low-educated women who face poorer employment prospects and expect to drift between jobs or between employment and unemployment. In such cases, unemployment could be less of an obstacle or even stimulate the transition to parenthood, with unemployment benefits or parental benefits providing some income. This line of argument is supported by the uncertainty reduction view, which maintains that for those with limited opportunities in the labour market, forming a family may provide an alternative way of providing some security in an otherwise uncertain life (Friedman, Hechter & Kanazawa 1994).

Among men, on the other hand, an uncertain employment situation could be particularly detrimental for those with low education. The financial ramifications of unemployment are likely to be more significant for men with low education than for highly educated men whose higher past earnings and wealth may provide them financial security during temporary drops in income. Highly educated young adults are also more likely to have affluent parents from whom they can expect to receive

financial support (Majamaa 2015). One could also argue that since fathers are increasingly expected to participate in childcare, the timing of parenthood and opportunity costs may have become more relevant for men (Huinink & Kohli 2014).

The few studies that have investigated educational differences in the effects of unemployment or precarious labour market position on the transition to parenthood among women have produced mixed results. In some studies, unemployment has been found to have a positive or negligible effect on first-birth risks among less-educated women (Schmitt 2012 for UK, France and Germany; Kreyenfeld & Andersson 2014, for Denmark and Germany; Kreyenfeld 2010 for East and West Germany). Among highly educated women, the responses to uncertain employment situations have varied between countries, not always consistently regarding the welfare state context. Kreyenfeld and Andersson (2014) found a negative effect of unemployment on first-birth risks among highly educated women in Denmark and Germany, and Wood and Neels (2017) found similar results in Belgium. A study among private sector employees in Finland found stronger negative effects of unemployment among highly educated women (Huttunen & Kellokumpu 2016). In contrast, Pailhé and Solaz (2012), focusing on partnered French women, found no marked differences between educational groups in their fertility responses to unemployment, while temporary employment delayed the transition to parenthood among highly educated women. A study on East-German women found even that among highly educated women, unemployment was associated with higher first-birth rates (Özcan et al. 2010).

There is less research on the relationship between men's employment and transition to parenthood and very little on educational differences in the associations between men's labour market status and entry into fatherhood. In the few existing studies, a lack of statistical power due to small sample sizes has prevented any clear conclusions based on the results (Schmitt 2012; Özcan et al. 2010). The available evidence suggests that the effect of poor labour market attachment on men's fertility may also vary between educational groups. For instance, Kreyenfeld and Andersson (2014) found that unemployment did not hinder the transition to parenthood among Danish low-educated men, whereas among German men, unemployment appeared to delay entry into parenthood regardless of educational attainment. In contrast, in France, Pailhé and Solaz (2012) reported that the negative effect of unemployment on entering parenthood was limited to less-educated men. We thus posit our second hypothesis: (H2) Unemployment is associated with delayed entry into parenthood among highly educated men and women. Among low-educated persons, gender modifies the association: low-educated women are less affected by insecure employment, but for low-educated men, joblessness discourages entry into parenthood.

Similarly, the effect of less secure labour market attachment may depend on the stage in the life course. Given that short unemployment spells and weak attachment to the labour market are common when entering the labour market for the first time, even those young adults who have found a job may not consider their situation much more secure than those currently without a job, thus diminishing the differences in first-birth risks between persons currently with or without employment.

Beyond median ages of entry into parenthood (30+ years), the majority of people have found stable employment, and joblessness may be more stigmatizing. Unemployed persons (women) may not want to jeopardize their employment by having children. For men in older age groups, entry into parenthood may be postponed due to a substantial, but supposedly temporary, decrease in family income. On the other hand, at this age, biological limits on fertility may be considered more relevant. While this issue is more likely to pertain to women, we could expect a similar pattern among older men, as their partners tend to be the same age. Somewhat countering this “biological clock” argument, Kreyenfeld and Andersson (2014) found a negative association between unemployment and first-birth hazards among Danish women in older age groups. Our third hypothesis is as follows (H3): *The negative association between unemployment and entry into parenthood is stronger in older than in younger age groups.*

Decisions on family formation likely depend not only on the current employment situation but also on past experiences and future expectations. It seems plausible that if less secure labour market attachment delays (or promotes) entry into parenthood, the effect is stronger among those whose position in the labour market is very weak or those who anticipate problems finding secure employment. Previous research proposes two opposing arguments regarding the impact of long-term unemployment on fertility. According to Kravdal (2002), persistent weak employment prospects could dampen women’s career expectations and turn them to the ‘family path’, thus having a positive effect on fertility. In contrast, Adsera (2004) claimed that continued unemployment can lead to ‘an unemployment trap’, in which women who consider pregnancy a risk for their future employment delay childbearing. While both views can be defended, it could be that responses to more durable unemployment vary by the educational level of the individuals, with the ‘family path’ being a more conceivable strategy among less-educated women, whereas highly educated women may wish to postpone childbearing even further when facing persistent difficulties finding employment. Indeed, Özcan et al. (2010), Schmitt (2012), Pailhé & Solaz (2012) and Ciganda (2015) found that, in general, longer duration intensified the negative effect of unemployment on the transition to parenthood for men, whereas the results for women were mixed.



In accordance with the aforementioned studies, we posit our fourth hypothesis (H4): *The negative link between unemployment and first-birth risks is stronger when joblessness has continued for a long period of time.*

Finally, we consider the role of union status in the association between employment or economic security and childbearing. Recent studies have shown that higher socioeconomic resources promote union formation and union stability (Lyngstad & Jalovaara 2010; Jalovaara 2012), thus increasing the time when a person is in a coresidential partnership and therefore at much higher risk than singles of having a child. Lack of a partner or late union formation are also important predictors of life-time childlessness (Jalovaara & Fasang 2017) and are likely to contribute to higher ultimate childlessness among persons in the lower social strata (Trimarchi & van Bavel 2017).

Consequently, union status could be an important mediating factor between employment or economic security and childbearing, with a possibly somewhat greater role among men than among women. A lack of data on cohabiting unions has often prevented the investigation of the impact of union status on the association between employment and fertility, or it has compelled researchers to confine their focus to marriages (for example, Andersson 2000; Kravdal 2002). Focusing only on persons living in unions, on the other hand, could mean that we overlook a potentially important role of uncertain employment in union formation and neglect non-union childbearing, and the total impact of weaker labour market attachment on the transition to parenthood cannot be assessed. Our fifth hypothesis can then be formulated: we expect that (H5) *the negative effect of unemployment or fewer economic resources on the entry into parenthood partly operates via union formation and union stability.*

### **3 The Finnish context**

Our study is set in Finland, a modern welfare society with relatively generous family and social policy measures available to all permanent residents. As in other Nordic countries, gender equality and the encouragement of women's employment have been prominent policy goals in Finland. Compared to many other countries in Europe, women's employment rates are high (Eurostat 2018), and most mothers return to full-time work after parental (or cash-for-care) leave. Basic social security guaranteed to all residents is low compared to the employed population, but many social security benefits, including parental leave provisions, contain an income-compensation element that is tied to previous earnings.

The income replacement level of parental benefits is approximately 70 per cent of previous earnings (approximately 80 per cent in the 1990s), thus presenting a strong incentive to seek employment before having a child. Paid parental leave has been available to both parents in Finland since 1985, and a minimum parental leave benefit is provided for persons who are not eligible for paid parental leave. Mothers' employment is encouraged through subsidized public day care, which is available to all children from less than one year of age up to school age. Individual taxation further supports the two-earner family model.

Although many policy measures support women's work and sharing of parenthood responsibilities between partners in Finland, several factors could increase incompatibility between paid work and parenthood for women. The share of parental leave days taken by men has remained low despite the introduction in 2003 of the father's quota in the parental leave scheme (Salmi 2012). Paid parental leave ends when the child is just below one year of age, after which parents can stay at home to care for their 1- to 2-year-old child on a home care allowance (cash-for-care). The low level of the allowance—less than the minimum parental benefit or basic unemployment benefit—does not encourage fathers' participation, and while most families (mothers) use the extended leave for some time, longer leave has been very common among mothers with a low or medium level of education (Repo et al. 2010; Salmi 2012).

In Finland, the economic downturn in the early 1990s was associated with unprecedentedly high unemployment. Since the recession period, unemployment among young adults has remained at a higher level, particularly among persons with low education. High levels of unemployment also marked a change in the employment situation of highly educated young adults, as it has become more difficult to find stable employment after graduation (Neittaanmäki & Ärje 2010; Loukkola 2012).

Despite marked economic fluctuations in the 1990s and the first decade of the 2000s, the main elements of the support provided for the unemployed have remained fairly unchanged. Registered unemployed job seekers without previous employment are entitled to the minimum unemployment benefit, and an earnings-related benefit is available for those who have contributed to the unemployment fund while employed. Those who are out of employment but have not registered at the unemployment office can apply for means-tested basic social assistance (Ministry of Social Affairs and Health 2018). These schemes provide some income replacement during unemployment or non-employment. However, the limited duration of the earnings-related benefit encourages fast

re-entry into employment. In addition, until 2003, the minimum parental benefit paid to those who became parents while unemployed was lower than the basic unemployment benefit (Haataja 2008).

#### **4 Data and methods**

We use a data extract prepared by Statistics Finland by linking data from a longitudinal population register and registers of employment, educational qualifications, vital events, and other register sources. The extract used in this study (permission TK53-663-11) is an 11 per cent random sample of persons born between 1940 and 1995 who were counted in Finland's population between 1970 and 2009. The data include full histories of childbearing and coresidential partnerships (including cohabitations; for rules of inference, see Jalovaara & Kulu 2018) for the sample persons, along with educational histories and annual measurements of economic activities (including unemployment months), incomes, and other data for the sample members and all their partners until the year 2009. The sample includes data on the timing of vital events and completed educational degrees with a precision of one month. Births for men are registered almost as completely as those for women; <2 per cent of women's children in the data have no father registered.

Our main variables of interest (employment status, income and data on cohabiting unions) have been measured since 1987, and we therefore restrict our analyses to first births from 1988–2009 for women and men born in the years 1948–1992. We further limit the analysis to Finnish-born persons (ca. 91 per cent in our sample) given the lack of information on the life histories of persons born abroad prior to immigration.

We use piecewise constant exponential models and report the results as hazard ratios. In our analyses, individuals are observed starting the month of their 18<sup>th</sup> birthday or January 1988 until the time of an event (pregnancy leading to birth) or censoring at age 40, emigration, death, or September 2009. The baseline hazard is assumed to be constant within each 1-year category of age, although it can vary between them. Individuals who enter the observation period at a later age than 18 years contribute to survival times beginning January 1988. In the piecewise exponential models, delayed entry is accounted for by distinguishing the date of origin (age 18) from the starting time of the follow-up (January 1988) (Royston & Lambert 2011). To examine whether uncertainties related to employment or economic situation influence first-birth risks differently depending on life course stage and education, we include a variable that combines education and employment and allows the effect to vary across age groups (process time) (Blossfeldt et al. 2007).

Our outcome event is a pregnancy that leads to the birth of the first child for a woman or a man. We set the month of conception by subtracting seven months from the date of the birth of the first child. This is done to ascertain that our independent variables are measured by the time of (perceived) conception and may therefore potentially influence childbearing decisions<sup>1</sup>.

All indicators of individuals' employment status, unemployment history, education and economic resources are time-varying. Our main interest is in the effects of employment status on the transition to first birth. Here, employment status is a broad measure of employment certainty, including information on past (un)employment. Taking into account not only present unemployment but also recent history of unemployment or non-employment and eligibility for unemployment benefits, we are able to distinguish persons in more vulnerable labour market positions among all non-employed persons. We combine information on economic activity in the previous calendar year (the reference period for which is the last week of the year) with data on the number of months employed or unemployed during that year to better capture (in)stability in employment. According to the Ministry of Labour's register, 'unemployed' persons are job seekers and are available for work; these are prerequisites for receiving unemployment benefits. The number of unemployment months (0–12 months of registered unemployment) during a calendar year is used to distinguish short- and long-term unemployment<sup>2</sup>. Our measure of long-term unemployment also includes recurring short-term unemployment spells.

Our measure of employment status has six categories: (1) employed; (2) currently unemployed with registered unemployment spells totalling less than four months during the same year; and (3) currently unemployed with unemployment spells totalling 4–12 months during that year. The fourth category, inactive (4), comprises persons who had no or only a few months of employment during the previous calendar year but had no economic activity recorded at the end of that year. This group includes, among others, long-term unemployed persons who are not actively seeking employment (e.g., are not registered as unemployed and are therefore not entitled to unemployment benefits). Persons with an inactive status (at the end of the year) but with a 5+ month employment history or with a 4+ month registered unemployment history were included in categories 2 and 3. Economic

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<sup>1</sup> We examined a 10-month lag when calculating the timing of conception, but this did not change the results. In addition, as information on economic activity and income is available on a yearly basis, the actual time difference between the time of conception (calculated with 7-month lag) and measurement of these two variables can be several months.

<sup>2</sup> Our data on unemployment spells do not contain any information on the exact timing of these periods but do include the number of months employed/registered unemployed during a calendar year.

inactivity is relatively rare, as most unemployed young adults try to register as job seekers, which allows them to claim unemployment benefits. Childless adults in Finland are rarely homemakers. Students form a separate category (5). Participation in education is determined on the basis of the information on economic activity, which distinguishes students from other groups outside the labour force. Pensioners (disability pensioners in this age group) and conscripts form a separate category, 'Other' (6).

We use income to measure financial resources independent of employment status. The income variable is based on data on annual income subject to state taxation during a calendar year, including social security benefits under state taxation (e.g., unemployment benefits, sickness benefits) in addition to earnings from current employment. To adjust for inflation, the annual amounts are converted to 2010 values (Statistics Finland 2015). We use a categorical representation for income, as it allows us to observe any nonlinearity in the effect.

Information on educational attainment is based on the date (monthly precision) of obtaining each educational degree and the level of the degree. Educational level is also a proxy for future employment certainty and wage potential. In the registration of economic activity at the end of the year, employment is given priority; consequently, many students who are gainfully employed (for example, working part-time) are recorded as being employed rather than students. This issue affects mostly young persons with a general secondary-level degree, many of whom are actually enrolled in tertiary-level educational institutions but often work in addition to studying.

We incorporate data on union status (resulting from union formation and dissolution) to examine to what extent the impact of labour market attachment and other socioeconomic resources on the timing of first births is mediated by partnership status. The data on unions are based on monthly data on the formation and dissolution of cohabiting and marital unions.

Finally, we control for parental occupational class (parental class) and place of residence (urban, semi-urban or rural). Parental occupational class is measured at approximately age 10, and place of residence refers to the previous year. Previous research has shown that parents' socioeconomic status affects fertility beyond their own socioeconomic status (Nisén et al. 2014) and that persons living in rural areas have higher risks of entering parenthood, net of other factors (Kulu et al. 2009). We also include a period indicator that refers to the calendar year. Appendix Table 1 provides distributions of exposure time on the variables.

Our analytical procedure is as follows: We first examine the effect of employment status on first-birth risk without data on income (Model I, includes control variables, educational attainment and employment status). In Model II, income is added, and in Model III, union status is included. All our analyses are carried out separately for men and women. The results from a model in which we examine educational and age-group differences in how employment status is linked with transition to first birth are presented as baseline hazards.

## 5 Results

### *5.1 Entry into parenthood among men and women*

Our measure of employment status shows the expected negative relationship between unstable employment and entry into parenthood for both men and women, and the association is less strong for women (Tables 1 and 2, Model I). Among both sexes, being currently unemployed decreases first-birth hazards in comparison to being employed. Furthermore, the association between unemployment and entry into parenthood clearly depends on the duration of unemployment or non-employment. For women, short-term unemployment delays parenthood, but the association is less strong, whereas longer unemployment (or non-employment) shows a clear negative association. For men, the association between unemployment and entry into parenthood is as predicted, as even a shorter unemployment spell appears to delay entry into parenthood considerably, and the negative impact of long-term or recurring unemployment on first-birth risk is even more marked. First-birth hazards are lowest among inactive persons who have little connection to the labour market (no or only a few months of employment or registered unemployment during the past calendar year)—among men, inactivity is associated with even lower entry into parenthood than full-time education. Thus, for both men and women, a weaker position in the labour market is associated with the postponement of parenthood, although the negative association is somewhat gendered in that it is stronger for men than for women.

Table 1. Models of entry into parenthood: hazard ratios and 95 per cent confidence intervals, 18- to 39-year-old women

Table 2. Models of entry into parenthood: hazard ratios and 95 per cent confidence intervals, 18- to 39-year-old men

The negative association between unemployment or non-employment and first-birth risks markedly decreases once we take into account that the non-employed tend to have lower incomes (Tables 1 and 2). Model II includes all indicators of socioeconomic status (employment status, education and

income). Among women, the negative association between shorter or longer unemployment spells and first-birth hazards disappears completely. It seems that the delaying effect of poorer labour market attachment, particularly long-term unemployment, on entry into parenthood for women is largely related to women's current financial situation. However, for men, the negative effects of long-term or recurring unemployment and inactivity persist, though they are less pronounced than in Model I, in which income was not controlled for.

Enrolment in education is associated with delayed entry into parenthood among both men and women in a very similar fashion. Once enrolment in education is accounted for, we find that tertiary-level education is positively associated with entry into parenthood (Model I, Tables 1 and 2). The negative effect of continued schooling is reflected among persons with general secondary education. As persons in this group are likely to continue their studies in tertiary-level institutions, it is possible that their low rates of entering parenthood capture in part the impact of continued schooling, which is not completely covered by the indicator measuring enrolment in education. We also find an elevated risk of entering parenthood among women with only basic-level education and, once we control for income, among basic-level-educated men.

The rate of entry into parenthood is consistently and positively associated with income among both men and women net of employment status and education (Model II, Tables 1 and 2). However, in the three lowest income groups (representing a little over one-third of men and women in our sample), the positive association between income and first-birth risks is rather marginal and not statistically significant. This result suggests that up to a point, low income is a barrier to childbearing and that below this threshold, improvements in one's financial situation have no marked effect. In the preliminary analyses, we distinguished earnings (salary from employment and entrepreneurial income) from other income but found no marked differences between the effects of all income and the effects of earnings on the transition to parenthood. Controlling for employment status somewhat weakens the positive association between income and entry into parenthood in the medium- and high-income groups (models not shown). Beyond a low level of income, the importance of better financial resources in childbearing choices is still clear, as first-birth hazards continue to grow in the high-income groups. The generally positive association between higher income and transition to first birth is notably similar among women and men.

We tested the robustness of our results by controlling for the years since entering the labour market<sup>3</sup>. In Finland, short employment spells are common among students who are about to finish their education; consequently, such individuals are often classified as ‘employed’ in the population registers. In that case, less stable employment reflects only simultaneous enrolment in education. Information on whether an individual has already entered the labour market in a more permanent fashion is likely to ‘screen out’ students from other employed persons. In addition, this approach controls for recent graduation among highly educated persons and the potential ‘boosting’ effect of ending schooling on transition to parenthood. However, the inclusion of a variable measuring years since entering the labour market did not markedly alter the results for employment status. The positive effect of accumulating years in the labour market on first-birth risks further supports the general observation of the positive impact of employment stability, as the rates of entering parenthood increase with time since entering the labour market (results available on request).

### *5.2 The role of union status*

We expected that a weaker economic or employment situation influences childbearing partly via union status, i.e., that unemployment and weaker employment perspectives diminish the chances of forming and maintaining a coresidential partnership, which then contributes to the postponement of parenthood. Indeed, for women, a comparison of Models II and III in Table 1 shows that when union status is introduced into the model, long-term unemployment is now positively associated with childbearing, and economic inactivity is no longer associated with delayed entry into parenthood. For men, the impact of adjusting for union status is very similar to that observed for women; however, the negative association between long-term unemployment or inactivity on entry into parenthood persists, albeit on a more modest level. Education is more robust to the inclusion of union status, as only the first-birth hazards among tertiary-level-educated men are markedly affected. Living in a couple relationship is less common among men and women with a basic level of education, and once union status is considered, the hazards for entering parenthood are further increased among the lowest educated persons. The positive income gradient is still apparent, but the gradient is less steep, particularly among men.

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<sup>3</sup> The first calendar year since age 18 with at least seven months in the labour force (either employed or unemployed) is defined as the year of entering the labour market.



### *5.3 Educational and life stage differences in the effects of employment uncertainty*

Our expectations are confirmed in that we find marked differences based on level of education in how uncertainties in employment are associated with the transition to parenthood. In Figures 1a and 1b, we present baseline hazards for various education and employment status categories for women (1a) and men (1b). The results are based on models that allow a combination variable measuring education and employment status to vary with age.

Figure 1a. Hazard rates for first births in three age groups, women by education and employment status.

Figure 1b. Hazard rates for first births in three age groups, men by education and employment status.

For basic-level-educated women, we find that current unemployment is not associated with lower rates of entry into parenthood but in fact appears to promote first childbearing (compared to employed basic-level-educated women or when compared to the effects of unemployment in the other educational groups). However, this result pertains only to young ages, women below 25 years. Furthermore, even longer unemployment or non-employment does not seem to impede childbearing in these young age groups of women with low education. In contrast, among young women with a medium level (vocational secondary level) or high level of education, unemployment seems to delay parenthood. Young women with general secondary level education show very low first birth hazards in all employment status groups, most probably reflecting the fact that these groups are still continuing their education (in tertiary level institutions) despite their being registered as economically active.

The negative association between joblessness and first-birth risks is more marked in the age groups around the median age of entering motherhood, e.g., approximately 25–30 years of age. In each educational group, we find that unemployment decreases the likelihood of becoming a mother and that the effect is considerably strong once the duration of unemployment increases.

In the older age groups, beyond age 30, first-birth risks are relatively low among basic-level-educated women, and there are almost no differences between the employment status groups. Among women with vocational secondary or tertiary levels of education, for whom entering parenthood beyond age 30 is more common, the negative association between unemployment and first-birth risks is weaker than in the age group of 25–30 years. However, the duration of unemployment still matters, and vocational- or tertiary-level-educated women aged 30+ with longer

periods of joblessness are less likely to enter parenthood than women in the same age group with a more secure position in the labour market.

For young men with a basic-level education, contrary to our expectations, we find a similar pattern to that observed for young women with a basic-level education: that unemployment spells do not have a negative effect on entry into parenthood. Even longer periods of joblessness do not seem to delay parenthood among less-educated young men compared to employed men with low education. As among women, this finding pertains to relatively young ages, those below 25 years. Beyond that age, unemployment lowers first-birth hazards in all educational groups. First-birth rates are considerably low among men with longer or recurring periods of unemployment. In contrast to women, unemployment or non-employment continues to be negatively and strongly associated with men's transition to parenthood in older age groups, beyond age 30.

## **6 Discussion**

This study focused on the relationship between employment status and entry into parenthood among Finnish men and women in the 1990s and in the first decade of the 2000s. We examined how uncertainties in employment are related to the timing of parenthood among men and women and whether the responses to unemployment vary between population groups.

We find, in line with our first hypothesis (H1a), that unemployment generally delays parenthood among young adults. Our results thus confirm recent views and empirical findings on the importance of economic security conveyed by (stable) employment on family formation and childbearing (Mills & Blossfeld 2005; Adsera 2011; Pailhé & Solaz 2012; Kreyenfeld & Andersson 2014). Given the welfare state context, in which many social benefits are earnings-related and thus encourage finding employment before entry into parenthood, the negative effect of unemployment is also plausible. Once joblessness continues or unemployment spells become more frequent, the negative association between unemployment and entry into parenthood is even more pronounced. Long-term or recurrent unemployment seems particularly harmful to fertility decisions (confirming our hypothesis H4), and while we cannot completely account for selectivity into long-term unemployment, it seems clear that a longer absence from gainful employment delays or prevents entry into parenthood for the majority of unemployed men and women.

However, we assumed that the relationship between employment uncertainty and entry into parenthood is not uniform across population groups but depends on life stage (hypothesis H2) and education (H3). Previous research has rarely observed potential heterogeneity in these associations.

In young adulthood, being without a job is more common, but we find that its effect on entering parenthood varies considerably among educational groups. Young men and women with no education beyond the basic level seem to be little affected by the instability of their employment. For young women with a basic level of education, unemployment even accelerates the transition to parenthood. In contrast, for medium-level or highly educated young adults, and men in particular, unemployment appears to carry a negative connotation, and parenthood is postponed until a more permanent position in the labour market is secured. Furthermore, around and above the average age of first childbearing, the negative impact of a weaker employment situation on the transition to parenthood becomes stronger.

Our findings are in line with those of Kreyenfeld and Andersson (2014) and Kreyenfeld (2010), who also found elevated first-birth risks among unemployed women with low education. However, this fertility-promotion effect appears to pertain exclusively to relatively young adults. Above young age groups, employment uncertainty delays entry into parenthood in all educational groups. The importance of the social status associated with secure employment on childbearing is thus clear, yet its significance appears to vary over the life course and by education. It may be that less-educated men and women follow a distinctive family formation pattern in young adulthood that is not markedly disrupted by transitions into and out of employment.

Various factors could contribute to this association. In Finland, registered unemployed job seekers are entitled to unemployment benefits that guarantee at least some basic income. Unemployed young persons with a basic level of education may anticipate that their future employment prospects are bleak, and if employed, their wage level would be relatively low. This expectation is reflected in the observation that even a longer duration of unemployment or recurring unemployment did not discourage entering parenthood among less-educated individuals. Parents receive a minimum parental leave benefit if they have no previous employment history, and an equally low-level home care allowance is provided for those who wish to care for a child who is less than three years old at home. These factors, including housing support, may diminish the difference in the financial situation between young adults living on benefits versus those in employment, and having a child is not expected to increase economic difficulties in the family.

We thus find some support for micro-economists' substitution argument (Becker 1993)—that low opportunity costs encourage childbearing—but only among less-educated women in young age groups. Somewhat surprisingly, this pattern is also found among men. In part, partnership behaviour may explain this result because less-educated men are likely to partner with women of the same

educational background (Blossfeld 2009; Mäenpää 2014). It could also be that there is a specific cultural pattern of early parenthood among persons with low levels of education that is not completely captured by controlling for parental socioeconomic status.

Overall, the association between effect of employment uncertainty and first childbearing is fairly similar among men and women, and stable employment predicts a higher likelihood of becoming a parent for both genders, at least in a contemporary Nordic society. In part, this finding runs through union formation and union stability, in which a better socioeconomic position seems to improve the chances of finding a partner and maintaining a union, regardless of gender (Jalovaara 2012; Jalovaara & Fasang 2017). The mediating role of union status is notably similar among men and women, and in line with our hypothesis H5, we find that employment uncertainty contributes to postponement of parenthood through union status among women to almost to the same extent that it does among men.

The gender differences have not completely disappeared, though, as our results show that unemployment still has a somewhat stronger impact on men's family formation than on women's family formation. Furthermore, while poorer financial situation explains the negative association between unemployment and entry into parenthood for women, being out of work still matters for men even when we account for low income in these groups. On the other hand, among Finnish men and women, a strong labour market orientation (measured as higher income) does not hinder parenthood but instead encourages it. Our results thus run counter to the assumptions of neoclassical family theory, which proposes a fairly uniform positive effect of employment security and higher income for men and a negative effect for highly educated women. However, these findings concur with previous studies that have found a positive association between socioeconomic resources and the transition to first birth among women, most consistently in Nordic countries (Pailhé & Solaz 2012; Kreyenfeld & Andersson 2014; Hart 2015).

It is evident that our study only partly covers factors that contribute to the postponement of parenthood among young adults. In particular, a partner's resources are likely to influence a couple's fertility choices and cushion against economic difficulties caused by the unemployment of the other partner. Accounting for this phenomenon could possibly diminish the role of a weaker labour market position in explaining the delay in entry into parenthood (see, however, Jalovaara & Miettinen 2013). While our study suggests that unemployment and poor financial resources delay parenthood, it could be that adverse effects of unemployment in early adulthood are overcome later in life. However, the fact that the negative association between employment uncertainty and

transition to parenthood was strongest around the ages typical for entering parenthood suggests that labour market shocks that affect individuals in their ‘prime childbearing ages’ may have long-lasting repercussions for realized fertility. Although we did not consider the long-term effects of weaker labour market attachment, it is evident that life-time childlessness has increased considerably in Finland, especially among persons with the lowest levels of education (Jalovaara et al. 2018). Nevertheless, we expect that our study shows the importance of paying attention to population group differences when examining how labour market insecurities affect fertility choices.

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Table 1. Models of entry into parenthood: hazard ratios and 95 per cent confidence intervals, 18- to 39-year-old women

	Model I		Model II		Model III	
	HR	95% CI	HR	95% CI	HR	95% CI
<b>Employment status</b>						
Employed	1		1		1	
Unemployed, <4mth unemployment	0.91	0.87–0.95	1.08	1.03–1.13	1.09	1.04–1.15
Unemployed, 4+mth unemployment	0.83	0.80–0.86	1.02	0.99–1.06	1.06	1.02–1.10
Inactive	0.56	0.52–0.61	0.81	0.74–0.88	0.99	0.91–1.09
Student	0.56	0.54–0.57	0.69	0.67–0.71	0.76	0.74–0.79
Other	0.10	0.09–0.12	0.14	0.12–0.16	0.23	0.20–0.27
<b>Education</b>						
Basic	1.04	1.01–1.07	1.05	1.02–1.08	1.07	1.04–1.11
Secondary level vocational	1		1		1	
Secondary level general	0.46	0.44–0.47	0.48	0.46–0.49	0.54	0.53–0.56
Tertiary	1.13	1.10–1.15	1.07	1.04–1.09	1.06	1.03–1.08
<b>Income (euros/year)</b>						
0–2,000			0.94	0.89–1.00	1.02	0.97–1.08
2,001–4,000			1.02	0.97–1.07	1.05	1.00–1.10
4,001–7,000			1		1	
7,001–11,000			1.09	1.05–1.14	1.01	0.97–1.05
11,001–16,000			1.30	1.25–1.35	1.11	1.06–1.15
16,001–21,000			1.46	1.40–1.52	1.20	1.16–1.25
21,001–28,000			1.60	1.53–1.67	1.33	1.28–1.39
28,001–			1.87	1.79–1.96	1.56	1.49–1.63
<b>Union status</b>						
No union					1	
Union					5.38	5.26–5.50
<b>Period</b>						
1988–1991	1.07	1.04–1.10	1.06	1.04–1.09	1.11	1.08–1.14
1992–1996	1.08	1.06–1.11	1.08	1.05–1.11	1.11	1.08–1.14
1997–2001	1		1		1	
2002–2005	1.01	0.98–1.04	0.99	0.96–1.02	0.93	0.91–0.96
2006–2009	1.01	0.98–1.04	0.96	0.93–0.99	0.90	0.88–0.93
<b>Municipality of residence</b>						
Urban	1		1		1	
Densely populated rural	1.16	1.13–1.19	1.18	1.15–1.21	1.16	1.13–1.19
Rural area	1.17	1.14–1.20	1.20	1.17–1.24	1.24	1.20–1.27
<b>Parental SES</b>						
Upper white-collar	1		1		1	
Lower white-collar	1.06	1.03–1.09	1.06	1.03–1.09	1.02	0.99–1.05
Manual worker	1.15	1.13–1.18	1.15	1.12–1.18	1.08	1.05–1.11
Entrepreneur	1.11	1.06–1.16	1.11	1.06–1.16	1.05	1.01–1.11
Farmer	1.03	0.99–1.06	1.03	1.00–1.07	1.03	0.99–1.07
Other/missing	1.20	1.15–1.24	1.20	1.16–1.25	1.14	1.10–1.19

Table 2. Models of entry into parenthood: hazard ratios and 95 per cent confidence intervals, 18- to 39-year-old men

	Model I		Model II		Model III	
	HR	95% CI	HR	95% CI	HR	95% CI
<b>Employment status</b>						
Employed	1		1		1	
Unemployed, <4mth unemployment	0.77	0.73–0.81	0.94	0.89–0.99	0.99	0.94–1.04
Unemployed, 4+mth unemployment	0.58	0.56–0.60	0.80	0.77–0.83	0.91	0.88–0.95
Inactive	0.45	0.41–0.49	0.69	0.62–0.76	0.82	0.74–0.90
Student	0.53	0.51–0.54	0.71	0.69–0.74	0.76	0.73–0.79
Other	0.27	0.26–0.29	0.39	0.36–0.41	0.53	0.50–0.57
<b>Education</b>						
Basic	0.96	0.94–0.99	1.01	0.99–1.04	1.04	1.02–1.07
Secondary level vocational	1		1		1	
Secondary level general	0.59	0.57–0.61	0.64	0.62–0.66	0.68	0.66–0.70
Tertiary	1.24	1.22–1.27	1.20	1.17–1.23	1.11	1.09–1.14
<b>Income (euros/year)</b>						
0–2,000			1.03	0.97–1.09	1.03	0.97–1.10
2,001–4,000			1.04	0.98–1.11	1.02	0.96–1.09
4,001–7,000			1		1	
7,001–11,000			1.18	1.12–1.23	1.06	1.01–1.12
11,001–16,000			1.33	1.27–1.40	1.11	1.06–1.16
16,001–21,000			1.54	1.47–1.62	1.19	1.13–1.24
21,001–28,000			1.75	1.67–1.83	1.26	1.21–1.32
28,001–			2.13	2.04–2.23	1.43	1.37–1.50
<b>Union status</b>						
No union					1	
Union					7.54	7.37–7.71
<b>Period</b>						
1988–1991	1.07	1.05–1.10	1.08	1.05–1.11	1.11	1.08–1.14
1992–1996	1.12	1.09–1.15	1.13	1.10–1.16	1.13	1.11–1.16
1997–2001	1		1		1	
2002–2005	1.02	0.99–1.04	0.98	0.95–1.01	0.93	0.90–0.95
2006–2009	0.99	0.96–1.02	0.94	0.91–0.97	0.89	0.87–0.92
<b>Municipality of residence</b>						
Urban	1		1		1	
Densely populated rural	1.04	1.01–1.07	1.06	1.04–1.09	1.19	1.16–1.22
Rural area	0.94	0.91–0.96	0.99	0.96–1.01	1.21	1.18–1.24
<b>Parental SES</b>						
Upper white-collar	1		1		1	
Lower white-collar	1.00	0.97–1.03	0.99	0.96–1.02	0.99	0.96–1.02
Manual worker	1.02	1.00–1.05	1.01	0.98–1.03	1.01	0.98–1.04
Entrepreneur	1.07	1.02–1.13	1.07	1.02–1.12	1.07	1.02–1.11
Farmer	0.97	0.94–1.01	1.00	0.96–1.03	1.13	1.09–1.17
Other/missing	1.02	0.98–1.07	1.03	0.99–1.07	1.03	0.98–1.07

Figure 1a. Hazard rates for first births in three age groups, women by education and employment status.

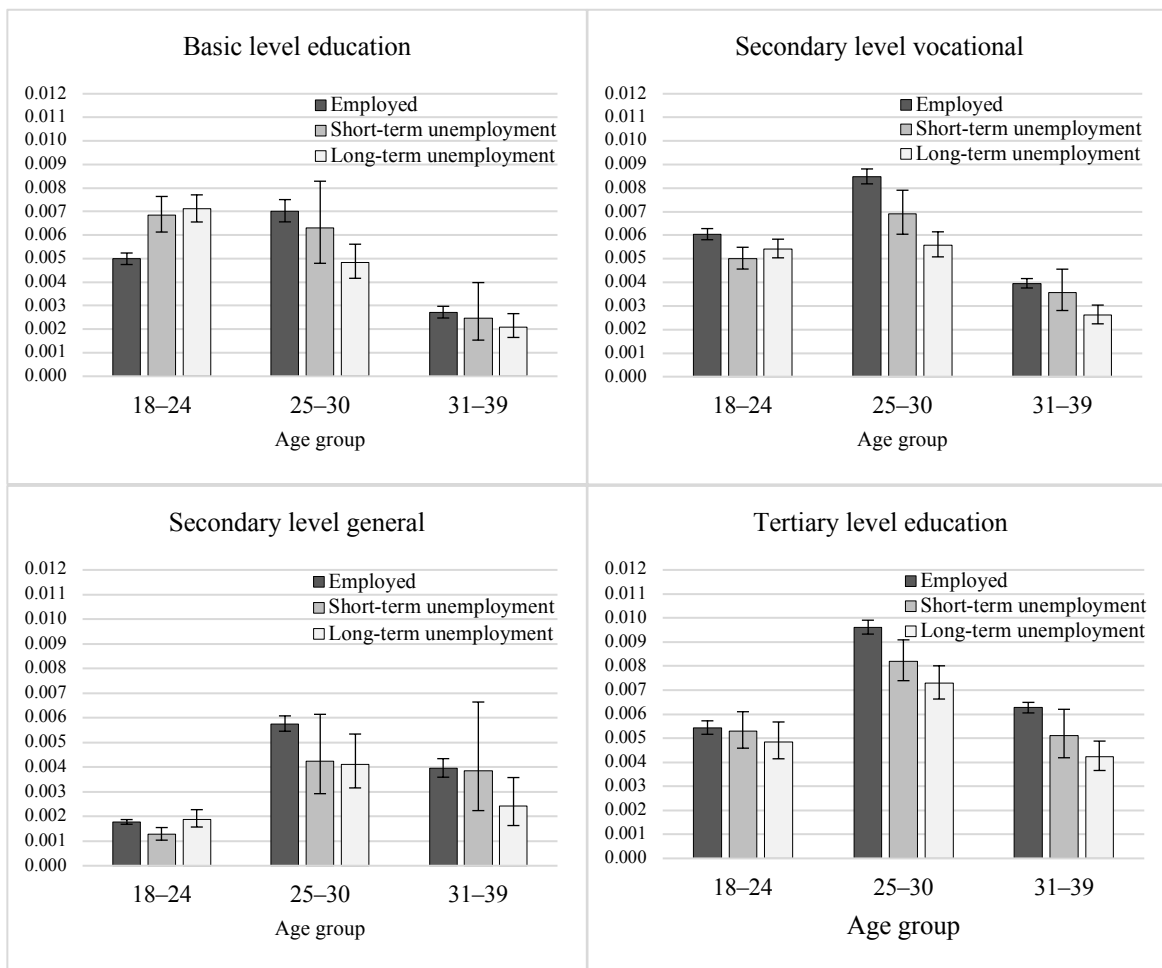
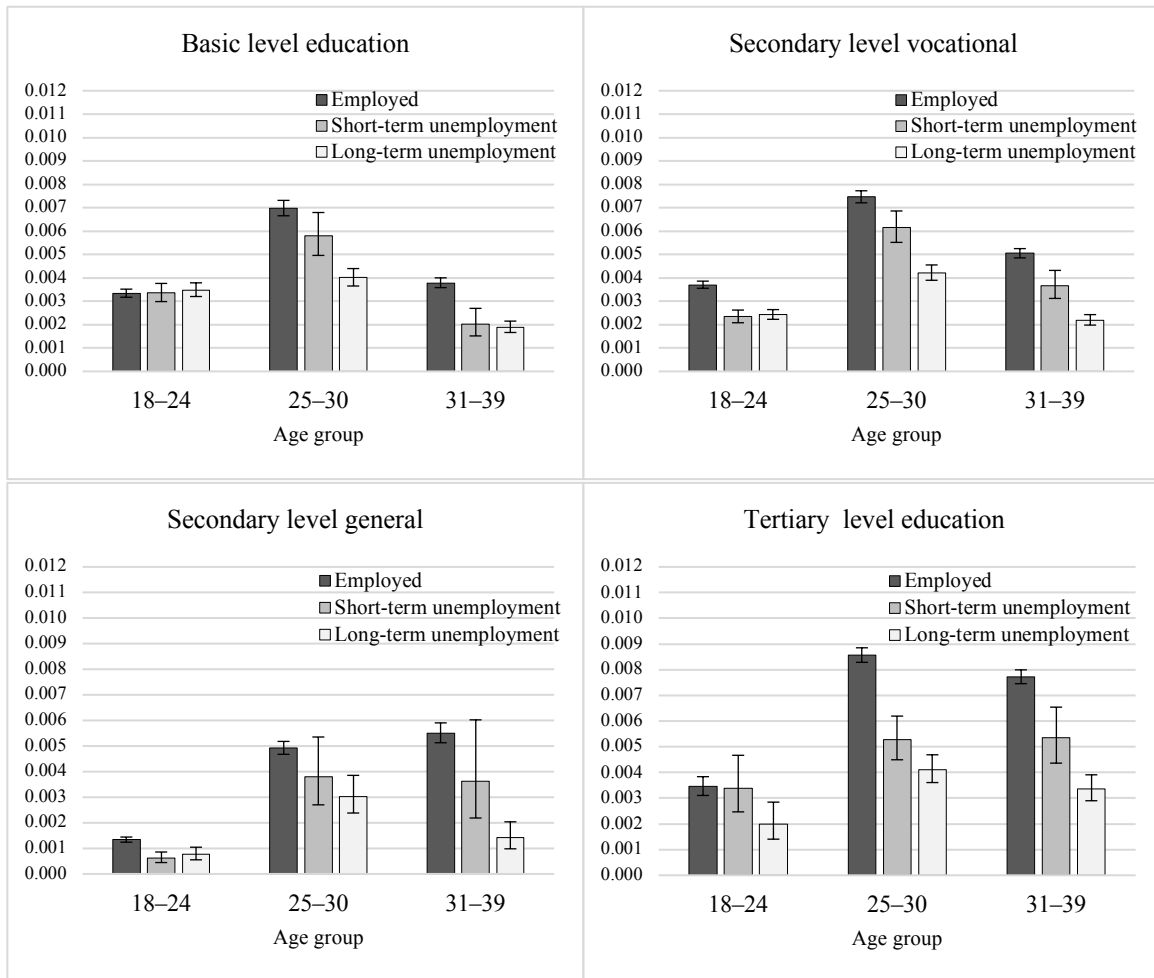


Figure 1b. Hazard rates for first births in three age groups, men by education and employment status



Appendix Table 1. Distribution of exposure time on independent variables

<b>Women 18–39 years</b>	<b>%</b>	<b>MEN 18–39 years</b>	<b>%</b>
<b>Employment status</b>		<b>Employment status</b>	
Employed	57.4	Employed	56.6
Unemployed, <4mth unemployment	3.4	Unemployed, <4mth unemployment	3.8
Unemployed, 4+mth unemployment	5.8	Unemployed, 4+mth unemployment	9.4
Inactive	1.9	Inactive	2.0
Student	28.3	Student	20.7
Other	3.1	Other	7.5
<b>Education</b>		<b>Education</b>	
Basic	18.7	Basic	25.5
Secondary level vocational	26.3	Secondary level vocational	37.5
Secondary level general	27.1	Secondary level general	20.4
Tertiary	27.9	Tertiary	16.5
<b>Income (euros/year)</b>		<b>Income (euros/year)</b>	
0–2,000	13.6	0–2,000	13.5
2,001–4,000	10.7	2,001–4,000	8.6
4,001–7,000	14.4	4,001–7,000	12.9
7,001–11,000	13.3	7,001–11,000	11.7
11,001–16,000	12.4	11,001–16,000	11.2
16,001–21,000	12.9	16,001–21,000	10.6
21,001–28,000	13.2	21,001–28,000	14.4
28,001–	9.6	28,001–	17.1
<b>Union status</b>		<b>Union status</b>	
No union	64.6	No union	73.5
Union	35.4	Union	26.5
<b>Period</b>		<b>Period</b>	
1988–1991	18.6	1988–1991	19.1
1992–1996	22.5	1992–1996	22.9
1997–2001	22.7	1997–2001	22.7
2002–2005	18.5	2002–2005	18.1
2006–2009	17.6	2006–2009	17.2
<b>Municipality of residence</b>		<b>Municipality of residence</b>	
Urban	75.1	Urban	69.3
Densely populated rural	12.8	Densely populated rural	14.9
Rural area	12.1	Rural area	15.8
<b>Parental SES</b>		<b>Parental SES</b>	
Upper white-collar	20.3	Upper white-collar	18.5
Lower white-collar	22.5	Lower white-collar	21.1
Manual worker	37.2	Manual worker	39.5
Entrepreneur	4.4	Entrepreneur	4.2
Farmer	8.5	Farmer	9.3
Other/missing	7.1	Other/missing	7.5
Number of exposure months, total	10,205,034	Number of exposure months, total	13,033,830