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Unemployment delays first birth 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 unemployment 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 unemployment 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). We find that unemployment or 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 does not apply to young, low-educated men. The effect of unemployment is largely mediated by the low income of unemployed persons. Overall, our 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.

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. Unemployment or otherwise uncertain employment situation could then severely hamper entry into parenthood.[2] Sparked by the recent recession, several studies have indeed demonstrated the link between economic downturn and declining fertility rates in various European countries (Adsera, 2011; Comolli et al., 2019; Goldstein, Kreyenfeld, Jasilioniene, & Örsal, 2013; Sobotka, Skirbekk, & Philipov, 2011). While macro-level association between high unemployment and fertility decline is commonly observed, theoretical considerations and empirical evidence on the association between individual unemployment and fertility choices remain ambiguous. The dominant micro-economic model suggests that as unemployment reduces opportunity costs of family formation, joblessness should encourage childbearing among women. For men, the model predicts a more straightforward negative effect, resulting from diminished income. Other perspectives have emphasized the increased uncertainty of the labour markets and the need for both men and women to find stable employment and to secure livelihood before entering parenthood. According to these views, unemployment should have a similar negative impact on first childbearing among both men and women.

Previous micro-level research has rather uniformly shown that employment and occupational resources promote men's entry into parenthood but findings concerning women remain inconclusive. In some studies, unemployment or a weak position in the labour market have been linked to a higher likelihood of having a first child for women (Andersson, 2000; Inanc, 2015; Kravdal, 2002; Schmitt, 2012 for UK and West-Germany), whereas others have concluded that secure employment encourages entry into motherhood (Comolli, 2017; Meron, Widmer, & Shapiro, 2002; Pailhé & Solaz, 2012; Schmitt, 2012 for France). Some studies have even found a positive link between unemployment and childbearing among men (Inanc, 2015; Özcan, Mayer, & Luedicke, 2010; Schmitt, 2012).

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[2] Note that throughout the article we use entry into parenthood, first childbearing and first birth synonymously although we acknowledge that there are other ways to enter parenthood than having a biological child, including stepparenthood and adoption.

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It is possible that the mechanisms linking employment to fertility have become more diverse with the educational expansion and 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 also among highly educated young adults (OECD, 2015). It could be that this heterogeneity partly explains contrasting findings regarding the impact of unemployment on fertility. Besides educational differences, the impact of unemployment on childbearing may depend on the stage in the life course, such as age. 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. 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 educational and life stage differences in the relationship between unemployment and transition to parenthood among young men and women in Finland. We expect to contribute to previous research on employment uncertainty and fertility nexus in several ways. First, the few studies that have investigated educational differences in the effects of unemployment on first childbearing among women in the event-history framework have provided mixed results (Kreyenfeld & Andersson, 2014; Özcan et al., 2010; Pailhé & Solaz, 2012; Schmitt, 2012; Wood & Neels, 2017; Yu & Sun, 2018), and there are only very few studies that include men or a gender comparison. Drawbacks in some of these studies has been that they have not been able to reach any clear results due to small sample sizes, or the measures of unemployment have been less ideal.

Second, large-N register data allow us also to consider several dimensions of socioeconomic resources, such as income and employment histories including the duration of unemployment spells, and to distinguish unemployment from other forms of economic inactivity. Unemployment is associated with economic insecurity, but it is unclear whether it has any effect on childbearing beyond short-term financial constraints. In young adulthood, earnings from paid work may not considerably exceed income provided by unemployment or other social benefits, but finding a job may be regarded as a sign of social standing, maturity, and longer-term prospects that facilitate family formation. We use data drawn from Finnish register sources that cover detailed life histories over several decades, with no sample bias arising from selective non-response. Register data on unemployment is more reliable than data drawn from other sources. Employment patterns have become more fragmented and individuals may face several unemployment spells over their life courses, rendering particularly retrospective survey data susceptible to recall errors. Our data include also information on partnership status regardless of marital status, which allows us to consider a potentially important mechanism through which (un)employment influences fertility behaviour.

Despite the inclusion of many control variables, our results on the effects of unemployment on entry into parenthood can be confounded by unobserved factors that affect the risk of both unemployment and childbearing. Recently, studies that have used firm closures as exogenous shocks to the employment careers have lent support to causal interpretation of the (negative) association between unemployment and fertility (Andersen & Özcan, 2013; Del Bono, Weber, & Winter-Ebmer, 2012; Del Bono, Weber, & Winter-Ebmer, 2015; Hofmann, Kreyenfeld, & Uhlendorf, 2017). Although some of these studies have investigated the impact of job displacement rather than unemployment, they also suggest a diverse impact of joblessness on childbearing depending on women's skill level or level of education (Andersen & Özcan, 2013; Del Bono et al., 2012; Huttunen & Kellokumpu, 2016).

Our study also 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. One could expect that in contemporary gender-egalitarian Western societies, stable employment and better earnings prospects encourage both men and women to have children. 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. Generous parental leaves and day care arrangements are aimed at facilitating the combination of paid work and family, and individualized social protection schemes reduce the need to rely on family or partner in ensuring a living. In such context we could expect considerable gender similarity in the consequences of unemployment for fertility.

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, growing numbers of young adults may find difficult to gain a foothold in the labour market before entering parenthood. Unemployment or non-employment is not only associated with (temporary) income loss, but leads to lower career expectations and can have long-term effects on future earnings and employment opportunities (Del Bono et al., 2015; Huttunen, Møen, & Salvanes, 2011; Verho, 2017).

Conventional micro-economic theory proposes two mechanisms through which employment status affects childbearing (Becker, 1993). On the one hand, it is assumed that higher income and more secure earnings associated with (stable) employment promote childbearing. Unemployment and loss of income should therefore diminish or delay childbearing as couples cannot afford to have children or postpone childbearing until securing their financial situation. On the other hand, bearing children involves relinquishing career opportunities at least temporarily, creating incentives to carefully plan the timing of childbearing or to reject it altogether. 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 (Becker, 1993). In this case, unemployment or non-employment could potentially encourage entry into parenthood (among women), as it frees time and reduces the opportunity costs.

Economic perspective and the view of specialized gender roles provides a reasoning for a positive link between unemployment and fertility. However, recent theoretical considerations on growing instability of the labour markets have argued that with increases in women's higher education and economic potential, the roles of men and women in maintaining the family have become more similar (Mills & Blossfeld, 2005; Oppenheimer, 1997). Consequently, not only a man's unemployment but also a woman's unemployment would be considered a risk for economic stability required for family formation and childbearing.

High local unemployment rates have been found to relate to postponement or rejection of childbearing as the fear of worsening economic situation depresses fertility among all individuals, not only among those who are unemployed (Adsera, 2011; Kravdal, 2002; Yu & Sun, 2018). However, empirical evidence regarding the impact of individual unemployment on fertility behaviours remains inconclusive. In line with the opportunity cost argument, some studies have found a positive association between individual unemployment or insecure employment and the transition to parenthood for women (Andersson, 2000; Kravdal, 2002; Schmitt, 2012 for UK and West-Germany), while others have found a negative (Comolli, 2017; Meron et al., 2002; Pailhé & Solaz, 2012; Schmitt, 2012 for France) or negligible association or only weak associations (Kreyenfeld, 2010; Özcan et al., 2010; Santow & Bracher, 2001; Vikat, 2004). Moreover, some studies have reported only weakly negative or even positive associations between men's unemployment and entry into parenthood (Inanc, 2015; Özcan et al., 2010; Schmitt, 2012; Tölke & Diewald, 2003 for UK men).

While (unmeasured) selection into unemployment could potentially explain the positive link between unemployment and childbearing in

some of the aforementioned studies, at least for women, recent studies using quasi-experimental research design have generally found that unemployment or job displacement has a negative impact on completed fertility (Andersen & Özcan, 2013; Del Bono et al., 2012; Del Bono et al., 2015; Hofmann et al., 2017; Huttunen & Kellokumpu, 2016). However, the impact of unemployment on first childbearing is less clear. Andersen and Özcan (2013) found that a job loss accelerated first childbearing for Danish women and had no discernible effect for men, whereas Hofmann et al. (2017) found the opposite for German women.

Decisions on family formation likely depend not only on the current employment situation but also on past experiences and future expectations. Some studies have taken a more dynamic view of labour market integration, paying attention to the duration of unemployment or the frequency of unemployment spells over the life course (for example, Ciganda, 2015; Özcan et al., 2010; Pailhé & Solaz, 2012; Schmitt, 2012). If less secure labour market attachment delays (or promotes) entry into parenthood, the effect is likely to be stronger among those whose position in the labour market is very weak or those who experience long-term unemployment. Previous research proposes two opposing arguments regarding the impact of long-term unemployment on women's fertility. According to Kravdal (2002), persistent weak employment prospects could dampen women's career expectations and turn them to the 'family path', 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.

Welfare state context can modify the link between employment status and fertility. In societies such as Finland which institutionally support mothers' employment and fathers' participation in childcare with generous family leave and child care policies, the opportunity costs of women are reduced, and childbearing and employment can be more easily combined (Esping-Andersen & Billari, 2015; McDonald, 2000). In this case, we could expect a faster transition to first childbearing among employed women, and small or no differences between employed and jobless women in their first childbearing. One could also argue that as 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).

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.*

We also expect, that (H1c): *The negative link between unemployment and first-birth risks is stronger when joblessness has continued for a long period of time.*

2.1. Educational and life course differences in the impact of unemployment

A limitation of many previous studies is that they do not examine potential heterogeneity in the association between unemployment or employment uncertainty and childbearing. Previous research has shown that socioeconomic background is related to the likelihood of experiencing job loss, and that consequences of unemployment or precarious employment situation on later life depend on education or social class (Doku, Acacio-Claro, Koivusilta, & Rimpelä, 2018; OECD, 2010; Verho, 2017). In times of worsening employment opportunities, highly educated young adults are also more likely to be sheltered against economic difficulties, for example, by having affluent parents from whom they can expect to receive financial support (Majamaa, 2015). Education also shapes expectations towards parental roles, which could affect how joblessness influences childbearing (Esping-Andersen & Billari, 2015; Sayer, Gauthier, & Furstenberg, 2004). Among persons with 'traditional' views on gender roles, a man's unemployment may be considered to collide with a view of him as the main breadwinner in the family whereas a woman's unemployment would not compromise her role as a mother.

One could thus assume that education modifies the association between unemployment and entry into parenthood. 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, and who are more likely to carefully plan childbearing according to their interests (Spéder & Kapitány, 2009). When facing unemployment, highly educated 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 (Del Bono et al., 2012). In generous welfare state contexts, highly educated women are also more likely than other women to benefit from policies that support reconciliation of work and family and make it easier to combine employment and childbearing.

Theoretically, one could also expect that responses to uncertain employment situation vary across population groups. Specialization strategy where the female partner devotes her time to (re)production in the household (i.e. unpaid care work) and the male partner to paid work may be less appealing for highly educated women who expect to find well-paying jobs in the labour market. For these women, long absences from the labour market are also likely be more costly than for less educated women, and consequently, unemployment followed by maternity leave a less attractive option. In contrast, entry into parenthood during unemployment could be a feasible strategy for less educated women who face poorer chances of finding a new job anyhow.

The evidence provided by recent studies has been mixed and not always in line what could be expected regarding the welfare state context. For example, Kreyenfeld and Andersson (2014) find for Denmark but also for Germany, and Wood and Neels (2017) for Belgium, that highly educated women responded to unemployment by postponing (or rejecting) entry into parenthood. A study among private sector employees in Finland also showed stronger negative effects of job displacement 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).

Unemployment or a poorer economic situation may not create such a barrier to childbearing among lower-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). In particular, less-educated women could opt for a 'family path' when facing more durable unemployment (Kravdal, 2002). Here, findings have been more consistent in that unemployment or a weaker labour market status has been associated with higher first-birth risks among less-educated women (Kreyenfeld & Andersson, 2014 for Denmark and Germany; Kreyenfeld, 2010 for East and West Germany; Schmitt, 2012 for UK, France and Germany; Yu & Sun, 2018 for US).

Among men, on the other hand, an uncertain employment situation could be particularly detrimental for those with low education. Less educated men (and women) are more likely to hold traditional views of men's role in the family and be more sensitive to changes that undermine his ability to maintain a family (Nieminen, 2008). The financial

ramifications of unemployment are also 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.

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 some studies, a lack of statistical power due to small sample sizes has prevented any clear conclusions based on the results (Özcan et al., 2010; Schmitt, 2012). The available evidence suggests that the effect of unemployment or poor labour market attachment on men's fertility may also vary between educational segments. 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 unemployment, but for low-educated men, joblessness discourages entry into parenthood.*

The effect of less secure labour market attachment may also depend on the stage in the life course. 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; women's educational attainment is on average higher than that of men, and their employment rates practically the same as those of men (Eurostat, 2018; Rissanen, 2001). 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.

On the other hand, given that short unemployment spells and weak attachment to the labour market are common when entering the labour market for the first time (OECD, 2010), 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. Unemployment and other social security benefits further reduce the differences in the financial situation between non-employed and employed young adults, and the possibility to receive small but otherwise certain income from parental benefits may appeal particularly to less-educated women.

Beyond median ages of entry into parenthood (30+ years), the majority of people have found stable employment, and joblessness may be more stigmatizing and have long-lasting effects, although earnings losses or difficulties finding re-employment are likely to be smaller among highly educated persons (Eliason & Storrie, 2006; Huttunen et al., 2011; Verho, 2017). In this age group, unemployed persons (women) may not want to jeopardize their re-employment by having children and instead focus on finding a new job. 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, and individuals are less likely to want to postpone childbearing much longer (Miettinen & Rotkirch, 2015). While this issue is more likely to pertain to women, we could expect a similar pattern among men, as their (actual or potential) partners tend to be around the same age. Somewhat countering this "biological clock" argument, Kreyenfeld and Andersson (2014) found that the association between unemployment and first-birth hazards among Danish women and men was stronger (or less positive among women with low education) in older age groups. Drawing on these considerations and the study by Kreyenfeld and Andersson (2014), 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*.

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 (Jalovaara & Kulu, 2018; Jalovaara, 2012; Lyngstad & Jalovaara, 2010), thus increasing the time when a person is in a coresidential partnership and therefore at much higher risk than singles of having a child. Unemployment or a weaker labour market position has also been shown to increase risk of divorce (Halla, Schmieder, & Weber, 2018; Rege, Telle, & Votruba, 2007). 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 limit their studies to marriages (for example, Andersson, 2000; Kravdal, 2002). Focusing only on persons living in coresidential partnerships, on the other hand, could mean that we overlook a potentially important role of uncertain employment in union formation and stability, and neglect non-union childbearing, and the total impact of weaker labour market attachment on the transition to parenthood cannot be assessed. Our fourth hypothesis can then be formulated: we expect that (H4) *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 or seek full-time employment after family leaves. The level of basic social security guaranteed to all residents is relatively low compared to average wages, 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), creating a strong incentive to seek employment before having a child. Right to return to previous job is guaranteed in the parental leave legislation. 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. Parents' 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 below 3 years old child on home care leave (return to previous job is quaranteed during the leave). The low level of the home care allowance (cash-for-care)—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 much more common among mothers with a low or medium level of education than among highly educated mothers (Repo, Sipilä, Rissanen, & Viitasalo, 2010; Salmi, 2012).

Finland experienced a deep recession period in the beginning of the 1990s during which unemployment rapidly reached unprecedentedly high levels. Since then the economy began to gradually recover although by the end of the first decade of the 2000s, unemployment rates were still higher than before the 1990s recession period. 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 & 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; less than two 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 to 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 18th 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), and those who enter the data set at a later age contribute to survival times only in the respective age groups. 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 categorical variable that combines education and employment and allows the effect to vary across age groups (process time) (Blossfeld, Golsch, & Rohwer, 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.[3] As we use conception rather than birth as our outcome, individuals with conceptions dated before January 1988, age 18, or conceptions which resulted in live birth after December 2009 are excluded. Data on abortions would have been a valuable extension to our dataset as the decision whether or not to carry a pregnancy to term could depend on a woman's (or her partner's) economic or employment situation. Unfortunately, data on abortions were not available for this study.[4]

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 current and past unemployment. 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.[5] 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. Experiencing unemployment was fairly common in our data: 33 per cent of women, and almost 40 per cent of men had been unemployed at some phase during the observation period, and 21 per cent of women and 28 percent of men had faced longer unemployment spell (s). 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+

[3] 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.

[4] We did not take into consideration adoptive parenthood or becoming a parent through stepparenthood. Becoming a parent through adoption is relatively rare, and the decision process differs markedly from the decision to attempt conception. This also applies to becoming a parent through stepparenthood. We also disregarded other outcomes of conceptions (stillbirths or miscarriages) as these data were not available in the Statistics Finland's registers.

[5] 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.

months employment history or with a 4+ months registered unemployment history were included in categories 2 and 3. Economic inactivity is relatively rare (constituting less than two per cent of the total person months in our data), 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 individual 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 non-linearity 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. We distinguish four categories: basic level education (no education beyond compulsory basic level education), secondary level general education (matriculation examination), secondary level vocational education, and tertiary level education (includes tertiary level degrees in applied sciences and universities). 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 employment status 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 individuals' own socioeconomic status (Nisén, Myrskylä, Silventoinen, & Martikainen, 2014) and that persons living in rural areas have higher risks of entering parenthood, net of other factors (Kulu, Boyle, & Andersson, 2009). We also include a period indicator that refers to the calendar year, dividing the observation period 1988–2009 into five categories, which partly reflect the turns in the economy. Our reference category is 1997–2001 during which the deepest phase of the recession (1992–1996) was already over and the economy was improving. Our observation period ends just before the Great Recession hit Finland (in 2009). 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. 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. All our analyses are carried out separately for men and women.

Table 1
Distribution of exposure time on independent variables.

Women 18–39 years	%	Men 18–39 years	%
Employment status		**Employment status**	
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
Education		**Education**	
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
Income (euros/year)		**Income (euros/year)**	
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
Union status		**Union status**	
No union	64.6	No union	73.5
Union (cohabitation or marriage)	35.4	Union (cohabitation or marriage)	26.5
Period		**Period**	
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
Municipality of residence		**Municipality of residence**	
Urban	75.1	Urban	69.3
Densely populated rural	12.8	Densely populated rural	14.9
Rural area	12.1	Rural area	15.8
Parental SES		**Parental SES**	
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

5. Results

5.1. Employment status and entry into parenthood among men and women

Our measure of employment status shows the expected negative relationship between unemployment and entry into parenthood for both men and women, and the association is less strong for women (Table 2 and 3, Model I) (Hypotheses 1a and 1b). 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 (Hypothesis 1c). For women, short-term unemployment delays parenthood, but the association is less strong, whereas longer unemployment 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

Table 2
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
Employment status						
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
Education						
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
Income (euros/year)						
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
Union status						
No union					1	
Union (cohabitation or marriage)					5.38	5.26–5.50
Period						
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
Municipality of residence						
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
Parental SES						
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

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.

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, Table 2 and 3). 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.

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 (Model II, Table 2 and 3). 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.

The importance of a more stable labour market position is reflected in that 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, Table 2 and 3). 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 (Table 2 and 3).

Table 3
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
Employment status						
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
Education						
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
Income (euros/year)						
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
Union status						
No union					1	
Union (cohabitation or marriage)					7.54	7.37–7.71
Period						
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
Municipality of residence						
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
Parental SES						
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

Importantly, unemployment status is measured at the end of the previous calendar year rather than at around the time of conception. It could be that some had already found a job in between and the decision to postpone parenthood reflects this change. While we did find some support for that a recent employment delayed entry into parenthood rather than accelerated it (comparing employed persons with shorter duration in employment with persons who had been employed longer), it seems unlikely that this could explain the observed negative association between unemployment and first childbearing (results available on request).

We tested the robustness of our results also by controlling for the years since entering the labour market.[6] 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. 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 and the potential 'boosting' effect of ending schooling on transition to parenthood irrespective of employment status. 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. Educational and life stage differences in the effects of unemployment

We assumed that the impact of unemployment on fertility is not uniform across population groups but that it varies according to education and age (Hypotheses 2 and 3). 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 Fig. 1a and b, we present baseline hazards for various education and employment status categories for women (1a) and men (1b), focusing on the impact of short- and long-term unemployment. The results are based on models that allow a combination variable measuring education and employment status to vary with age. We present the results in annual hazard rates (obtained by multiplying the monthly hazards by 12).

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

[6] 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.

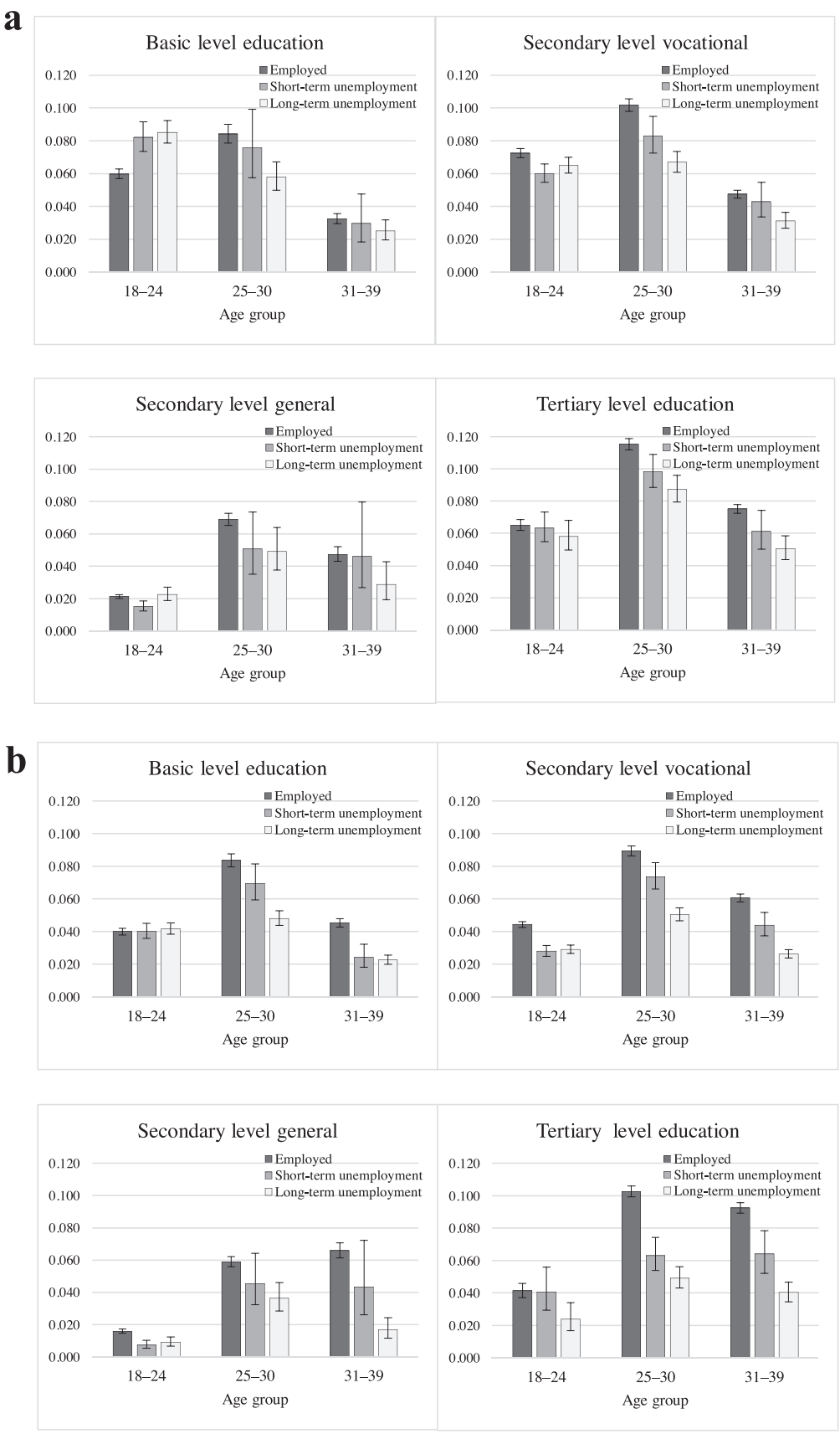

Fig. 1. a Annual hazard rates for first births in three age groups, women by education and employment status. b Annual hazard rates for first births in three age groups, men by education and employment status.
Models include the combined variable for education and employment status, and control variables for period, municipality of residence and parental SES.

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), unemployment seems to delay parenthood, but there is no visible difference between short- and long-term unemployment. 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. First birth hazards are relatively high and unemployment shows no marked delaying effect among tertiary level educated women in the youngest age group. However, the proportion of women belonging to this group is small as reaching a tertiary level degree by age 24 is fairly uncommon in Finland.

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, although short-term unemployed women do not differ statistically significantly from employed women among women with basic level or general secondary education. The negative effect of unemployment on first birth hazards 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 secondary (general or vocational) 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, and short-term unemployment shows no marked delaying impact. However, the duration of unemployment still matters, and secondary- 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. In the other educational groups, unemployment clearly delays first childbearing but there is no difference between short- and long-term unemployment (with the exception of tertiary level educated; however, the proportion of young men below 25 years with a tertiary level degree is small). 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.

5.3. 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 (Hypothesis 4). Indeed, for women, a comparison of Models II and III in Table 2 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 (Table 3). 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.

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 unemployment is related to the timing of parenthood among men and women and whether the fertility responses to unemployment vary between population groups. Although macro-level studies have generally found a negative link between rising levels of unemployment and fertility, there is still controversy over how one's own unemployment affects childbearing, in particular among women.

We find, in line with our hypothesis, 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 for both sexes (Adsera, 2011; Hofmann et al., 2017; Huttunen & Kellokumpu, 2016; Kreyenfeld & Andersson, 2014; Mills & Blossfeld, 2005; Pailhé & Solaz, 2012; Wood & Neels, 2017). 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, 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 and education. Previous research has paid less attention to 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. Among men, unemployment continues to have a strong negative effect on entry into parenthood in the older age groups (31–39 years) whereas for women in this age group, unemployment prevents entry into parenthood only if it continues long.

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. In general, our results also concur with recent studies by economists, which have more effectively

addressed selection into unemployment (Andersen & Özcan, 2013; Del Bono et al., 2012; Hofmann et al., 2017; Huttunen & Kellokumpu, 2016). A more direct comparison of the results is not possible as none of these studies consider the impact of unemployment in similar subgroups as in our study. Yet the findings of Del Bono et al. (2012) that the adverse impact of job displacement on fertility is particularly apparent among childless, older, or high-skilled women seems to largely match to what we find.

Various factors could contribute to that transitions into and out of employment appear to little disrupt family formation patterns of less-educated men and women. 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 to 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 considerably 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. While we cannot rule out endogeneity in this association—that childbearing decisions may influence (un)employment rather than the other way round—it is unlikely to hold for men. Partnership behaviour may explain this result because less-educated men are likely to partner with women of the similar educational background (Mäenpää, 2015). 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 status 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; Rege et al., 2007). The mediating role of union status is notably similar among men and women, and in line with our hypothesis, we find that unemployment 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 (Hart, 2015; Kreyenfeld & Andersson, 2014; Pailhé & Solaz, 2012).

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 the partner's income 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. Many young adults, women in particular, carefully plan their childbearing and the decision (not) to enter parenthood may have become an ever more important step in the family formation process. Life-time childlessness has increased considerably in Finland, especially among persons with the lowest levels of education (Jalovaara et al., 2018), and although we did not consider the long-term effects of weaker labour market attachment, 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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