

# Resources, aspirations and first births during the Great Recession

Chiara Ludovica Comolli

University of Lausanne, Lausanne, Switzerland

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## ABSTRACT

Many studies show that labor market uncertainties are important predictors of the postponement of parenthood. While most existing studies investigate the consequences of the deterioration of employment conditions in *absolute* terms, in this paper I test the hypothesis that *relative* changes in occupational conditions affect childbearing choices. In particular, building on the Easterlin Hypothesis of resources and aspirations I investigate how intergenerational mobility among American men and women during the Great Recession affected their chances of becoming parents. Using respondents' labor market trajectories from the PSID 2003–2017 data, I show that when both men and women hold an occupational position as prestigious as that held by their parents when they were growing up, they are more likely to have a first child than when they hold a downward-mobile job. However, men and women differ in how this process is moderated by aggregate labor market conditions.

## 1. Introduction

Insecure financial and employment circumstances are often viewed as materially (or normatively) incompatible with the entry into parenthood (Blossfeld & Mills, 2003; Kohler & Kohler, 2002; Kreyenfeld & Andersson, 2014; Kreyenfeld, Andersson, & Pailhé, 2012; Vignoli, 2013). Couples often postpone marriage and parenthood until they have established a relatively solid position in the labor market (Vignoli, Drefahl, & De Santis, 2012). A rewarding and secure job, or a stable present and future income, are often seen as necessary conditions for forming a family. Especially in periods of rising uncertainty, however, it is more difficult for couples to assess which income or labor market position is solid enough in absolute terms, so we may argue that individuals assess their own socioeconomic position more in relative terms. Couples in the decision-making process of becoming parents might refer to the experience of people in their network, family and friends, before establishing their own family (Fasang & Raab, 2014).

The influence of family background on the fertility behavior of children has long been of interest to sociologists and demographers (Duncan, Freedman, Coble, & Slesinger, 1965; Murphy, 1999; Murphy & Wang, 2001). During the 1970s in particular, the American economist Richard A. Easterlin (1976, 1987) formulated the theory that individuals make childbearing decisions based on a relative measure of their socioeconomic status: the amount of their disposable resources relative to the socioeconomic aspirations they formed in their family of origin, based on their parents' social status. When the intergenerational relative socioeconomic status is in favor of the younger generation, or at least

stable, they have children relatively soon; otherwise, they postpone childbearing until their aspirations are fulfilled.

Given the socioeconomic position of the parents, relative status is affected by changes in the disposable resources. The past decade in the United States (US), like in most advanced economies, has been characterized by strong economic and labor market uncertainty that has deeply affected individuals' financial and employment security. The evidence on the consequences of the Great Recession in the US shows that the number of young married men (25–29 years old) living with their family of origin increased by about 5% between 2007 and 2011 (Cherlin, Cumberworth, Morgan, & Wimer, 2011; Danziger, 2013), and that 24% of young adults aged 18–29 had moved back to their parental home (Livingston & D'Veira, 2010). These findings suggest how difficult it has been for young individuals and couples to live independently of their family of origin, from whom they seek assistance and receive financial and practical help. During recessions, younger generations face fewer and less-rewarding career opportunities compared to their parents, so it becomes more arduous for adult children to reach the status of their parents and thus fulfill their own aspirations. These adverse conditions are often cited as a reason why young adults postpone their exit from their family of origin as well as their own family formation (Meron & Widmer, 2002). If this holds, we would expect the Great Recession to reduce childbearing also *via* this mechanism of reduced resources over aspirations. The crisis has negatively affected not only young adults and their entry into the labor market, but also the occupational trajectories of individuals later in the life course. During periods of rising employment uncertainty, even experienced workers are more likely to find

E-mail address: [chiara.comolli@unil.ch](mailto:chiara.comolli@unil.ch).

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themselves unemployed or forced to move to downward-mobile jobs. For these reasons, it is important to look at a longer occupational trajectory and not only to the very young workers.

The first aim of this study is to assess whether the postponement of childbearing in the recent decade of rising uncertainty is associated with the declining occupational opportunities for American men and women relative to the greater opportunities of their parents. To my knowledge, this is the first study to investigate the relative socioeconomic status mechanism during a very recent period in a Western country (for Eastern European countries see Billingsley, 2011 and Billingsley & Matysiak, 2018). Simultaneously, given the period studied (2003–2017), this paper informs the literature on the consequences of the Great Recession on fertility behavior, focusing on an overlooked mechanism: the conflict between resources and aspirations.

Relatedly, the second contribution of the study is to show how contextual conditions moderate the association between aspirations and resources, and parenthood. Besides the evaluation of one's own socioeconomic position based on aspirations formed in the family of origin, in fact, individuals are affected intragenerationally by the present context they live in. The economics and psychological literature show that aggregate unemployment has spillover effects on health and well-being going beyond the unemployed (Clark, Knabe, & Rätzl, 2010). The worsening of labor market opportunities might have either a *multiplicative* or an *attenuating* effect (De Lange, Wolbers, Gesthuizen, & Ultee, 2014; Clark et al., 2010; Oesch & Lipps, 2012) on the relationship between individual-level employment and fertility. Similarly, we can hypothesize that the impact of one's own socioeconomic and occupational status on childbearing varies depending on the local economic context. For instance, Billingsley and Matysiak (2018) recently demonstrated that the economic context moderates the relationship between intra- and inter-generational social mobility and second births in Poland and Russia.

## 2. Theoretical background and empirical research

### 2.1. Theoretical background

#### 2.1.1. The intergenerational mechanism: the easterlin hypothesis

The theoretical framework is based on the relative economic status theory developed by Richard Easterlin (1976) to explain fluctuations in birth rates. The Easterlin Hypothesis, in turn, speaks to the broader stream of research on social mobility and its implications for childbearing behavior (Breen & Goldthorpe, 1997; Goldthorpe, 1996; Boudon, 1974). In the present study, I am interested in a crucial assumption that these theoretical models make, namely that individuals make strategic decisions by grounding them in their socioeconomic aspirations, which are formed in their family of origin.

In particular, Easterlin's argument is that individuals who have reached the socioeconomic position of their family of origin are more likely to believe they can afford parenthood, and hence are predicted to have higher fertility compared to downward-mobile individuals. The latter, in fact, comparing their social status to that of their family of origin, are less likely to feel they are in an adequate position to have children. In the original formulation of the theory, Easterlin (1976) argues that relative cohort size, through its impact on young adults' labor market opportunities and disposable income relative to their socioeconomic aspirations formed in their family of origin, affects fertility. The expectation of a recovery of fertility after the bust of the 1970s–1980s, which never materialized, followed from this argument. Moreover, evidence of an opposite mechanism of lowered labor market opportunities for smaller cohorts has emerged. The reduced number of new enterprises combined with labor market rigidities, in fact, alienate investment from small cohorts and lowers employment chances (Lutz, Skirbekk, & Testa, 2010; Shimer, 2001; Skans, 2005). In subsequent formulations of the theory (Easterlin, 1987), the author emphasizes the role of socioeconomic status and how one's own status is identified relative to the level

of parental influence during the formative teen years. This aspect of the Easterlin Hypothesis is the focus of the current study, not relative cohort size.

Individuals make strategic decisions based on the evaluation of their own disposable socioeconomic resources relative to their aspirations or, at least, to their idea of an acceptable standard of living. The latter is based on the resources and socioeconomic conditions under which an individual has grown up, namely those of the family of origin. According to Easterlin, the decision to have children does not depend on individuals' absolute socioeconomic status but on their relative status compared to that of their parents; the more satisfactory the comparison is, the more likely they are to have children.

As mentioned, Easterlin's argument fits into the wider body of literature on the nexus between social mobility and fertility. The relative socioeconomic status hypothesis is one of the mechanisms through which mobility potentially affects childbearing (for a review see Kasarda & Billy, 1985). However, mobility-fertility theories focus explicitly on the process of moving up or down the social ladder net of the socialization or acculturation processes represented by the (additive or multiplicative, depending on the model) effect of origin and destination statuses (Billingsley, Drefahl, & Ghilagaber, 2016; Kasarda & Billy, 1985; Sobel, 1985; Stevens, 1981). On the contrary, within the Easterlin framework, the effects of social origin and mobility are inherently indistinguishable as both immobile and upward-mobile individuals reach their aspirations and no theoretical difference between those who reach exactly and those who exceed their parents' social position is hypothesized. This theoretical difference is reflected in the empirical modelling of the process which also does not isolate mobility with respect to origin and destination, as the methodological section will clarify.

#### 2.1.2. The intragenerational mechanism: the adaptation hypothesis

The economics and social psychology literature show that unemployment rates have spillover effects on the well-being of both those who experience joblessness and those who do not (Clark et al., 2010). Those who have a job suffer from a rising unemployment rate because it signals an increasing risk of becoming unemployed themselves in the future. The anticipation of future job loss might be even more stressful than experiencing unemployment itself (Witte, 1999). Furthermore, when the labor market is highly unstable employees tend to experience increasing workload and feel the pressure to commit to their job, in the fear of losing it, rather than embarking on family commitments (Clark et al., 2010). For the unemployed, high unemployment rates signal the higher risk of remaining jobless for a long time, making the experience of non-working even more stressful. On the other hand, previous studies show that being unemployed when this condition is very common buffers the stigma of joblessness and reduces the feeling of distress that is typical when one is out of the job market (Clark, 2003). Similarly, labor market scholars argue that prolonged periods of unemployment, by attenuating the social norm of working and the stigma associated with not working, might generate an adaptation mechanism (Blanchard & Summers, 1986; Lindbeck, Nyberg, & Weibull, 2014; Oesch & Lipps, 2012). Yu and Sun (2018) and Schneider and Hastings (2015) show that the effect of aggregate unemployment on childbearing decisions differs by women's social origin in the US. Yu and Sun (2018) show that more disadvantaged women tend to delay childbirth in response to rising unemployment while more highly educated or women with highly educated parents do not. The authors suggest that only disadvantaged women anticipate a higher likelihood of losing their job when aggregate unemployment increased.

The literature has mainly utilized unemployment rates as a general proxy for economic uncertainty, because of data availability and cross-country comparability, and because of its direct perception of it in individuals' everyday life. However, recent studies show that demographic behavior is affected by other facets of economic uncertainty (Comolli, 2017; Comolli and Vignoli, 2021; Kreyenfeld, 2010). Beyond

unemployment rates, temporary or precarious job contracts (Vignoli, Tocchioni, & Salvini, 2016; Vignoli et al., 2012; Vignoli, Tocchioni, & Mattei, 2019), inactivity, long-term unemployment or joblessness persistence (Busetta, Mendola, & Vignoli, 2019) represent other aspects of labor market insecurity. Even more broadly, economic uncertainty encompasses employment polarization, poverty and inequality rates, and the perception of insecurity (Ayllón's, 2019; Seltzer 2019).

In the present study, the focus is on the mismatch between the resources linked to the current job and aspirations, rather than on joblessness; therefore, the theoretical mechanism tested here is whether one evaluates his/her occupational position differently when the labor market context he/she lives in is more troublesome. If the risk of joblessness increases, the outlook on having a lower relative socioeconomic status becomes more positive in light of the comparison with the unemployed, and the negative effect of downward relative to upward mobility on the chances of having children might diminish. In this case, contextual factors would have an *attenuating* effect on the relative socioeconomic status impact on the transition to first birth, and differences across groups would be reduced. On the contrary, a diffused and prolonged stall of labor market conditions might add up to the individual-level dissatisfaction, inducing the person to further postpone childbearing due to an even more pessimistic view of the future. In particular, the effect would be stronger for the downward mobile as they are more at risk of losing the job or moving further down compared to the non-downward mobile. In this case, contextual factors would have a *multiplicative* negative effect. Rising unemployment rates in the local area of residence multiply the negative effect of one's own declining occupational prestige on the chances of forming a family, and group differences would thus widen.

## 2.2. Empirical research

The empirical evidence following the publication of Easterlin's study on the relationship between economic resources and aspirations on the one hand and fertility on the other is mixed. Cross-country analyses investigating the impact of relative cohort size and fertility rate find support for the Easterlin Hypothesis in Anglo-Saxon countries, but little or no support in Continental and Southern European countries (Pampel & Peters, 1995; Pampel, 1993). Both macro- and micro-level applications of the relative social status' aspect of the Easterlin Hypothesis have been extremely loose in their interpretation of the relative income measure, coming to very different conclusions. According to Macunovich (1998), 15 micro-studies in the US support Easterlin's thesis, while seven do not. Among the latter, however, five rely on self-assessed objective and subjective measures of relative economic status, which do not mirror Easterlin's original explanatory variable. The other two studies obtained mixed results (Olneck & Wolfe, 1978; Thornton, 1980), but neither of them found relative economic resources to be correlated with higher fertility. Among supportive micro-analyses, measures of relative economic status also vary greatly. Most use the measure of relative economic status as defined by Easterlin (husband's income relative to the parental income or relative occupational status), while others use husband's income relative to some measures of 'predicted' income based on characteristics like age, age at marriage, education, place of birth, and occupation.

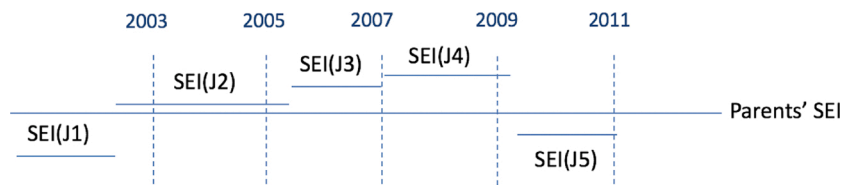
In recent decades, empirical research regarding the Easterlin hypotheses has been modest, in light of the fact that early studies received controversial support. Bernardi (2007) investigates the effect of social mobility on the transition to first birth for Italian men. Results show that the higher the socioeconomic level of the family (father's occupational prestige) in which an individual grew up – in other words, the luckier he was during childhood – the higher his minimum income aspirations will be upon entering adulthood and consequently the more difficult it will be to realize these aspirations. The probability of fatherhood actually increases around 10% if the individual is non-downward-mobile with respect to his parents. Moreover, both Bernardi (2007) (for Italy) and

Aassve, Burgess, Propper, and Dickson (2006) (for the UK) find that the higher the parental socioeconomic status the slower the offspring's entrance into the labor market (the longer they wait to accept their first occupation), net of education (Aassve et al., 2006); and consequently, the lower their likelihood of setting up a family (Bernardi, 2007). Billingsley and Matysiak (2018) investigate inter- and intra-generational mobility in Poland and Russia in relation to second births. In such contexts, they find that it is the status enhancement (Kasarda & Billy, 1985) that drive higher parities, namely that mobility reduces fertility. In Poland, downward mobility is associated to increased risk of a second child, while in Russia, upward mobility is associated to reduced risk of the second child. Interestingly, they also find that career mobility before parenthood affects later childbearing decisions more strongly than the current mobility. Billingsley and Matysiak (2018) bring women into the literature on mobility and fertility, which has traditionally focused only on men's status, overlooking the growing public social and economic role of women. Both in Poland and Russia, they show that it is among women that the status enhancement reduces the risk of second birth; for men, they do not find any association between mobility and childbearing.

Empirical evidence in the field of sociology and demography is quite limited regarding the interplay of micro- and macro-level labor market conditions in shaping the transition to motherhood. Kravdal (2002) shows that, in Norway during the 1990s, men's local unemployment rates were more strongly related to first births than was individuals' own unemployment. De Lange et al. (2014) study the interaction of macro- and microeconomic uncertainty on family formation in the Netherlands, testing the normative and material principle of being economically able to support a family (Kreyenfeld et al., 2012; Oppenheimer, 1988). They did not find that macro- and micro-level insecurities reinforce each other in the transition to the first union or child. A recent study by Yu and Sun (2018) shows that in the US, local unemployment rate affects the risk of childbearing differently from own unemployment, depending of men and women's social origin. Disadvantaged women delay childbearing in response to aggregate unemployment but not own unemployment, while women with a higher social background behaved in the opposite way. Yu and Sun (2018) argue that women with a lower social background suffer more during periods of high unemployment because they risk more than the more advantaged women. However, once unemployed, their prospects of improvement are much smaller compared to the high social origin women who instead risk more when unemployed themselves. Finally, Billingsley and Matysiak (2018) demonstrate that the economic context, in their case the transition from socialist to post-socialist market economies in Eastern European countries, moderates the relationship between intra- and inter-generational social mobility and second births. Occupational class mobility is more strongly associated to childbearing after the market reforms.

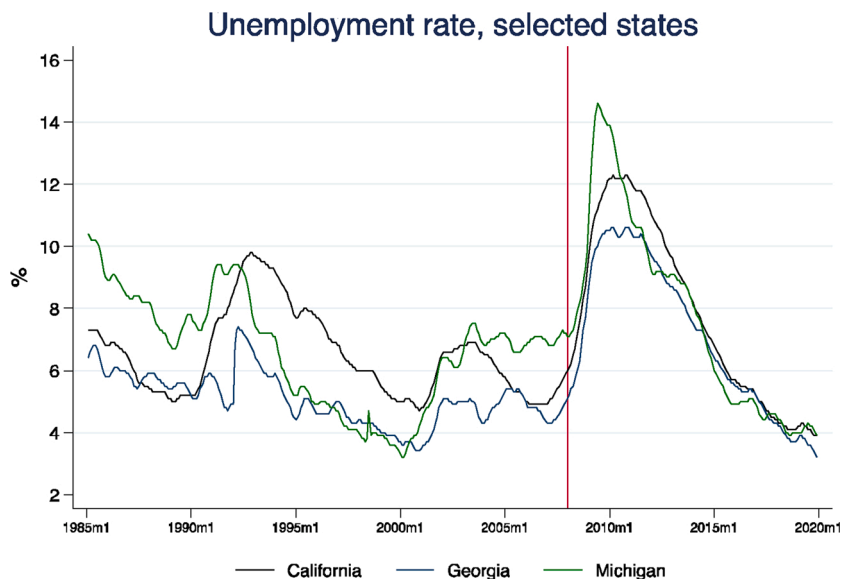
## 3. Data, variables and model

The dataset used in this analysis is the US Panel Study of Income Dynamics (PSID), a biennial longitudinal survey that started in 1968. Any individual born to, adopted by, or married to a member of the original core sample becomes part of the PSID study and, as children move out of the parental home and establish their independent units, they are interviewed as new families. Following children as they become adults, while maintaining the representativeness in the sample of the US population over time, is a unique survey design that facilitates inter-generational studies (McGonagle, Schoeni, Sastry, & Freedman, 2012). Demographic, educational, and labor market information is available for all family members. The PSID further traces in detail the occupational trajectories of survey respondents. Retrospective information is recorded on first full time occupation and the last four jobs preceding the interview, regarding the type of occupation, and the start and end date of each job. In this way, the effect on childbearing risk of both the *kind* of occupation and the *time* and *duration* of each job can be estimated.



**Fig. 1.** Hypothetical relative Socioeconomic Index (SEI) variation over occupational trajectory.

Source: Elaboration of the author. Note: SEI stands for Socioeconomic Index (Hauser and Warren, 1997) and the Js represent jobs ordered as experienced by the respondent (Job1–Job5). From left to right, time increases; from bottom to top, Socioeconomic Index increases.



**Fig. 2.** Monthly state unemployment rates 1985–2019.

Source: Elaboration of the author based on Bureau of Labor Statistics (1985–2019) data. Note: In the PSID sample, unemployment ranges from 2.1 in Virginia in October and November 2000 to 14.6 in Michigan in June 2009.

Moreover, for each individual the survey reports the state of residence at the time of the interview, so that individual-level information can be linked to local macroeconomic conditions.

The analysis focuses on American men and women who are either the female/male head or the female/male partner in an independent household interviewed in the last eight waves of the PSID panel (2003–2017). The sample is composed of 3355 men and 2709 women born in or after 1968<sup>1</sup> partnered or unpartnered. The risk of first birth is modeled using event history analysis through a Cox proportional hazards model with time-dependent covariates (1464 men and 1245 women had their first child during the observed period). Respondents are observed from age 17 until they have their first child, or they are censored at the earliest point among when they turn 46 (only for women), they first out-migrate or exit the survey.<sup>2</sup> The failure event is set to 12 months before the birth of the first child to capture the moment around the time when the decision is made to have a child. I assume the decision to become parent is discussed among partners, and that sometimes a number of attempts are necessary before becoming pregnant. The explanatory variables are thus measured the year before the

birth occurred. However, respondents do not enter the study at the same age. Depending on the age they were at the time of the first recorded job,<sup>3</sup> some are observed since they became at risk at age 17 - for them we dispose of the complete job history - but others enter the study later, after having been at risk for some time. These spells that come under observation after exposure are left-truncated. Contrary to the unconditional logistic regression, the Cox model, conditioning the hazard on the length of exposure to risk and specifying a delayed entry of each woman at the time at which her first occupation is recorded, controls for left-truncation (Allison, 1984, 2010; Guo, 1993).

The main explanatory variable is *relative status*: a continuous measure of intergenerational relative socioeconomic status varying for each occupational<sup>4</sup> episode he/she experiences. Relative status is the ratio between the Socioeconomic Index (SEI) linked to each respondents' occupational episode and the average index of his/her parents' occupation when they were growing up. Including mother's status is recommended, especially in younger cohorts (Beller, 2009). The average is preferred over the higher of the two parents' SEI, since recent studies support the notion that parental resources are accumulated in the family and that the dominance model, compared to the average, is a suboptimal

<sup>1</sup> This automatically excludes respondents from the original PSID sample. Only the children of original respondents are part of the analytic sample.

<sup>2</sup> The origin is set to age 17 instead of 15 for two reasons. First, teen pregnancies are rare in the sample and measurement errors are large; second, the focus of the analysis is on intentional births and their nexus to occupational mobility, while teen pregnancies are usually unintended and not linked to employment itself. However, robustness checks are conducted using a time origin of age 15 and results are unaffected.

<sup>3</sup> The average age of first recorded job varies by cohort. It is higher in the oldest cohort (around age 31) and lower and very similar in the two youngest cohorts (around age 25).

<sup>4</sup> While, compared to occupation, income might be perceived as a more universal measure of what can be afforded and easier to rank than jobs, own past jobs but especially parental occupations are much easier to recall (Beller & Hout, 2006).

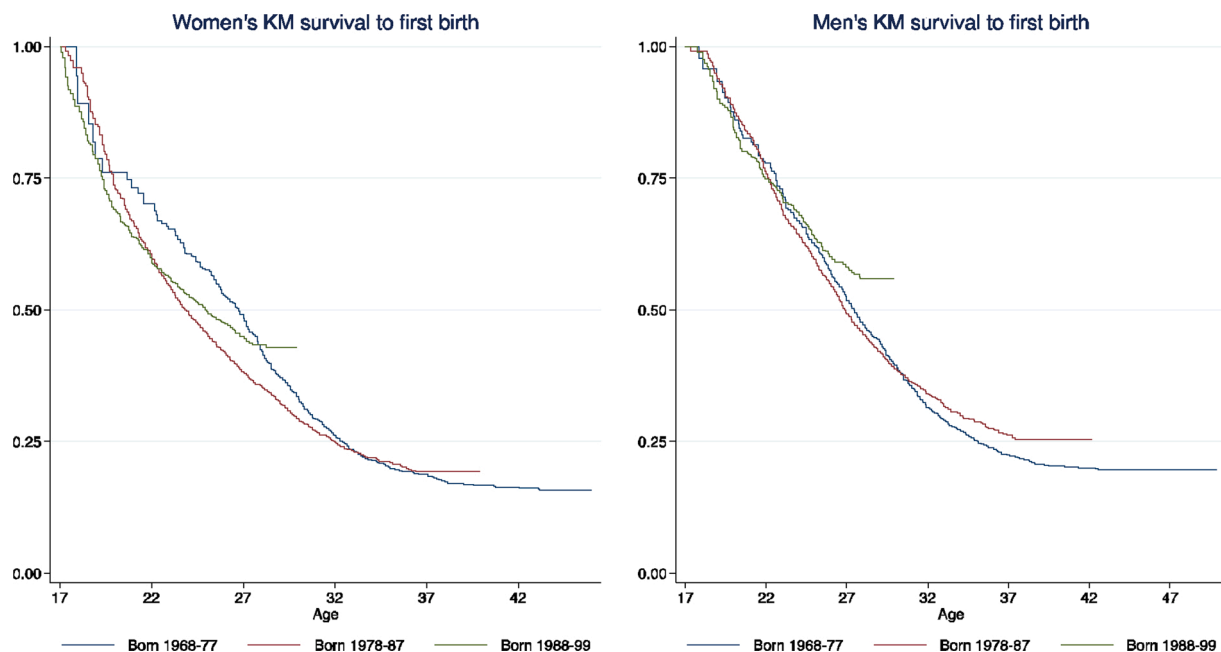


Fig. 3. Kaplan-Meier estimates of survival to first birth. By birth cohort.  
Source: Elaboration of the author based on PSID (2003–2017) data.

measure of social background when children's occupation is the outcome (Thaning & Hällsten, 2018). The three-digit occupation code (2002 Census) of each job is linked to its SEI (Hauser and Warren, 1997). The index varies from 7.55 in Production Occupations to 80.5 for Managers in Legal Issues (Tab. A.1). Mothers' and fathers' occupations when respondents were growing up are also linked to their SEI and then averaged<sup>5</sup>.

Fig. 1 illustrates how relative status can theoretically vary over respondents' occupational trajectories. Relative status varies for each job: it likely increases with tenure, but if one is forced to move to a lower SEI job, a shift from being above aspirations to suddenly being below them is plausible. The variable is continuous (mean 1.08 for men; mean 1.15 for women) so that, as in Easterlin's original formulation, the second generation's aspirations are not set exactly equal to parental SEI but rather as a function of it. This operationalization of the independent variable, relative status, would imply that only working respondents are included in the analytic sample. To include episodes of unemployment or inactivity<sup>6</sup> each spell of joblessness is imputed with the SEI of the previous job when available and a dummy for joblessness is included in the models. Only respondents who are out of the labor force for the entire period of observations or have missing occupation information for a substantial part of time are dropped from the sample (17.8% and 22.1%, respectively for men and women). The distribution of men's and women's and parental SEI (Fig. A1) shows only a mild tendency of increasing occupational status across the two generations.

Contextual factors are operationalized through the monthly unemployment rates of the state of residence at the time of the interview. The unemployment data cover a long time period (January 1985 - November 2017) during which though, as Fig. 2 illustrates for three selected US

<sup>5</sup> Mothers' and fathers' occupations are also coded in the 2002 Census occupational code to make them comparable to the respondents' occupational codes.

<sup>6</sup> It is not possible to separate unemployed and inactive respondents in the data. Unemployment spells other than those coinciding with the interview are based on the occupational trajectories. However, there is no information on whether men and women are unemployed or out of the labor force between the interviews.

states, unemployment rates increased substantially only during the Great Recession, hence they basically capture the aggregate labor-market effects of the crisis. The data cover 50 US states, thus women in the sample are exposed to different degrees of severity of the recession both across time and location (Fig. 2). This variance in unemployment rates can be exploited in the analysis to grasp the effect of being exposed to this different scale of labor market uncertainty, beyond individual occupational status.

The control variables are race, birth cohort, number of siblings, years of completed education, and a dummy for being married (detailed descriptive statistics in Tab. A.2). I control for parental SEI<sup>7</sup> to test whether the socioeconomic position of the family of origin explains (partly or entirely) the effect of a higher relative status on first birth. Additional analyses by quartiles of parental SEI highlight the possible nonlinearity in the link between aspirations and resources on the one hand and childbearing on the other. The effect could be driven, in fact, on the one hand, by the highly achieving ones who come from a high socioeconomic family background and reach their very high aspirations (also thanks to family means) or, on the other hand, by respondents at the bottom of the distribution for whom it might be relatively easier to reach and maintain the socioeconomic status of their family of origin (despite the low family means).

Notably, despite the inclusion of parental SEI as a control and as a moderator of the association between relative socioeconomic status and the transition to motherhood, in the models the effects of aspirations and current resources remain largely indistinguishable, as the theoretical formulation by Easterlin (1976, 1987) contemplates. While studies of mobility-fertility require the isolation of the combined (in an additive or multiplicative form depending on the model) effects of origin and destination from the effect of mobility, bringing up several identification issues (Sobel, 1985), the latter are not a concern in the present study since the intention here is not to isolate mobility (thus modelling non-linearities) but rather to highlight whether higher relative socioeconomic status is positively associated to entering motherhood.

<sup>7</sup> The multicollinearity between parental SEI and relative SEI does not represent a problem: The Variance Inflation Factor that is slightly above 1 for both variables.

**Table 1**  
Cox model for the hazard for first birth. Women.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)
Relative status	1.17*** (1.06–1.30)	1.22*** (1.07–1.39)	1.16** (1.01–1.33)	1.22*** (1.07–1.39)	1.21*** (1.06–1.39)	1.17* (0.98–1.41)	1.38** (1.05–1.82)	1.11 (0.76–1.61)	1.86*** (1.20–2.89)
Not working	0.50*** (0.36–0.69)	0.51*** (0.37–0.70)	0.61*** (0.44–0.84)	0.51*** (0.37–0.70)	0.50*** (0.36–0.69)	0.60* (0.34–1.04)	0.41** (0.20–0.83)	0.55* (0.28–1.06)	0.68 (0.33–1.41)
Relative status*Not working			1.85*** (1.24–2.78)						
Unemployment rate (cent.)				1.03** (1.00–1.06)	1.03** (1.00–1.06)	1.03 (0.97–1.08)	1.05** (1.00–1.11)	1.01 (0.96–1.07)	1.03 (0.97–1.08)
Relative status*Unemployment rate					1.02 (0.98–1.07)				
Parents' SEI		1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)				
Years of education	0.91*** (0.88–0.94)	0.90*** (0.87–0.93)	0.90*** (0.88–0.93)	0.90*** (0.87–0.93)	0.90*** (0.87–0.93)	0.95 (0.90–1.02)	0.85*** (0.80–0.91)	0.88*** (0.82–0.94)	0.84*** (0.78–0.91)
Married	1.99*** (1.74–2.27)	1.98*** (1.74–2.27)	2.00*** (1.75–2.28)	1.99*** (1.74–2.27)	1.99*** (1.74–2.28)	1.67*** (1.29–2.17)	2.28*** (1.75–2.98)	1.82*** (1.39–2.38)	2.28*** (1.70–3.06)
Cohort 1978–87	1.05 (0.91 - 1.21)	1.05 (0.91 - 1.21)	1.04 (0.90 - 1.20)	1.02 (0.89 - 1.18)	1.02 (0.89 - 1.18)	1.30 (0.92 - 1.82)	0.97 (0.73 - 1.28)	0.95 (0.72 - 1.26)	1.02 (0.77 - 1.34)
Cohort 1988–99	0.85 (0.69–1.04)	0.85 (0.70–1.04)	0.84* (0.69–1.03)	0.82* (0.66–1.00)	0.82* (0.66–1.01)	0.91 (0.60–1.39)	0.84 (0.57–1.24)	0.84 (0.54–1.32)	0.76 (0.48–1.20)
One sibling	1.14 (0.88–1.47)	1.14 (0.88–1.47)	1.13 (0.87–1.47)	1.14 (0.88–1.47)	1.13 (0.88–1.47)	1.21 (0.65–2.25)	0.97 (0.62–1.50)	1.24 (0.73–2.11)	1.28 (0.74–2.22)
Two siblings	1.25* (0.97–1.62)	1.25* (0.97–1.62)	1.25* (0.97–1.62)	1.25* (0.97–1.62)	1.25* (0.97–1.62)	1.28 (0.70–2.35)	0.98 (0.63–1.52)	1.38 (0.82–2.35)	1.69* (0.97–2.94)
Three siblings	1.23 (0.94–1.62)	1.23 (0.94–1.62)	1.23 (0.93–1.61)	1.22 (0.93–1.61)	1.22 (0.93–1.61)	1.39 (0.74–2.59)	0.86 (0.53–1.40)	1.25 (0.70–2.21)	1.51 (0.85–2.67)
Four or more siblings	1.24 (0.94–1.64)	1.24 (0.94–1.64)	1.24 (0.94–1.64)	1.25 (0.95–1.65)	1.24 (0.94–1.64)	1.18 (0.64–2.19)	0.99 (0.61–1.60)	1.22 (0.67–2.22)	1.22 (1.07–3.61)
African American	1.05 (0.90–1.22)	1.06 (0.91–1.23)	1.06 (0.91–1.23)	1.05 (0.90–1.22)	1.05 (0.90–1.22)	0.97 (0.74–1.28)	1.18 (0.89–1.55)	1.07 (0.78–1.46)	1.01 (0.69–1.47)
Other ethnicity	0.91 (0.72 - 1.15)	0.91 (0.72 - 1.15)	0.92 (0.72 - 1.16)	0.90 (0.71 - 1.14)	0.89 (0.70 - 1.13)	0.85 (0.56 - 1.29)	0.75 (0.46 - 1.22)	0.81 (0.44 - 1.50)	0.98 (0.61 - 1.56)
Subjects	2709	2709	2709	2709	2709	2709	2709	2709	2709
N	184,672	184,672	184,672	184,672	184,672	44,025	45,644	47,167	47,836

Source: Elaboration of the author based on PSID (2003–2017) data. Note: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

However, given that the distinction between immobility and upward mobility might be interesting and the continuous relative SEI variable allows it, in the next section results that are presented graphically plot synthetic childbearing risk curves for both groups.

#### 4. Results

Fig. 3 illustrates the Kaplan-Meier estimates of the survival functions to first births (conception) for men and women born in three different cohorts (1968–77; 1978–87; 1988–99). Women in the oldest cohort postponed first birth more strongly in their 20s (during the 1990s) compared to the younger cohorts that entered their 20s in the early 2000s. The youngest cohort, observed only until their late 20s, started delaying childbearing after the age of 25 but the postponement seems very persistent and by the age of 27 around 40% of them are still childless. The two oldest cohorts of men display almost identical survival curves, while similarly to women, men in the youngest cohort after the age of 25 are postponing first births.

Tables 1, 2 report results from the Cox proportional hazards model of first birth showing the odds ratios of the transition to fatherhood and motherhood as explained by individual-level relative status and aggregate-level state unemployment rates. The odds ratios for the variable of interest, relative status, are positive in all models, suggesting that the higher the occupational status of both men and women relative to that of their parents the higher the risk of first birth, net of all demographic controls, their educational level and the socioeconomic status of their family of origin. These results support the Easterlin's hypothesis of resources and aspirations. The greater the socioeconomic status of respondents' jobs relative to their parents' status when they were growing up, the faster is their entry into parenthood. An odds ratio

of 1.2 for women means that each point increase in relative status compared to their parents' status, increase their risk of entering motherhood of 20%. As an example, imagine a woman whose father was a construction worker and the mother a healthcare worker (average parental SEI of 40.5). If this woman moves from being a shop assistant (SEI of 38) to a sale manager (SEI of 49), her risk of a first child increases by 5.4% according to the model. A man with the same family background and job mobility profile would see the risk of fatherhood increase by 6.8%.

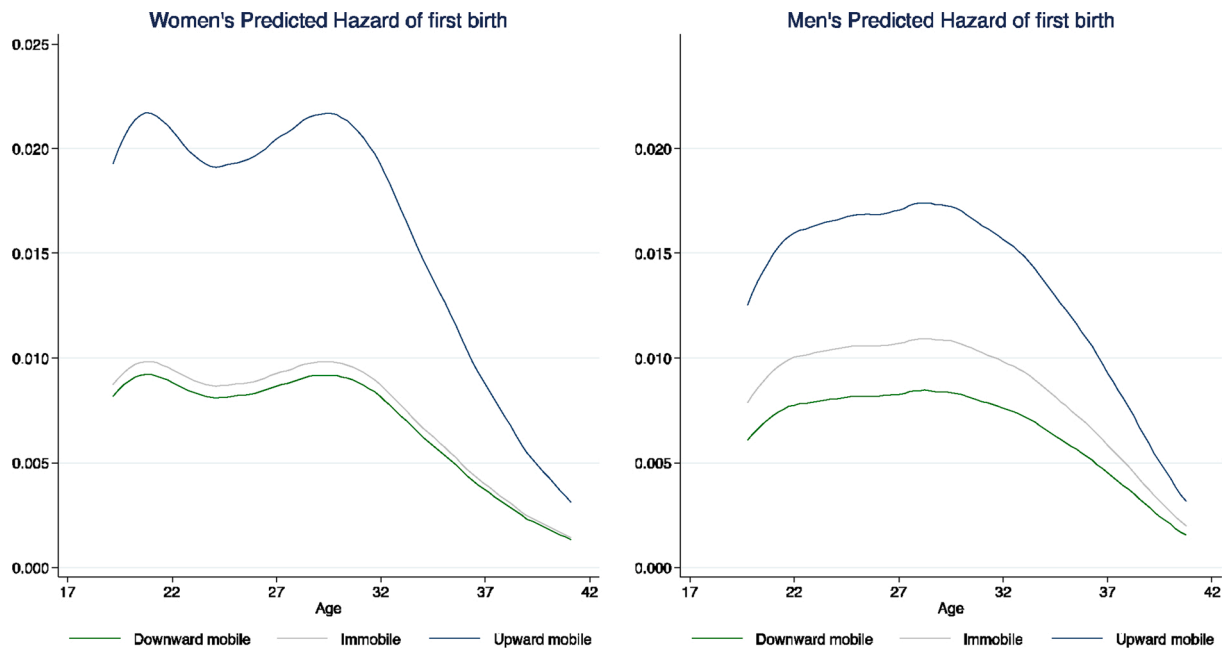
A graphical tool for a more intuitive interpretation of results is provided by the predicted hazard curves which plot the Cox model estimated hazard function at hypothetical values of the covariates.<sup>8</sup> Fig. 4 illustrates the profiles of three hypothetical respondents' occupational mobility scenarios: a downward mobile (relative status around 0.5–0.6, green curve), an immobile (relative status 1, grey curve) and an upward mobile (relative status around 5, blue curve). The results are plotted for working White married men and women; all other controls are set at the mean. The figure confirms that the hazard of first birth is higher for those in upward mobile jobs relatively to their parents than for those in downward mobile job, and that the difference tends to be larger before the age of 30. Immobile men and women display a risk of parenthood in between the two curves, although closer to downward mobility than upward. There are no major gender differences except for the shape of the hazard functions which is bimodal for women (the risk of motherhood peaks first around age 20 and then around age 30) while

<sup>8</sup> The Stata command `stcurve` does not produce confidence intervals and the command `survci`, which plots cumulative survival functions with bootstrapped confidence intervals does not support multiple-records data (Cefalu, 2011).

**Table 2**  
Cox model for the hazard for first birth. Men.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)
Relative status	1.17*** (1.05 - 1.31)	1.25*** (1.09 - 1.43)	1.15* (1.00 - 1.32)	1.25*** (1.09 - 1.43)	1.27*** (1.11 - 1.45)	1.25** (1.04 - 1.51)	1.21 (0.92 - 1.60)	1.12 (0.78 - 1.62)	1.26 (0.78 - 2.05)
Not working	0.47*** (0.34–0.65)	0.49*** (0.35–0.68)	0.65*** (0.47–0.90)	0.48*** (0.35–0.67)	0.49*** (0.35–0.69)	0.29*** (0.13–0.62)	0.69 (0.39–1.21)	0.39** (0.18–0.85)	0.59 (0.31–1.11)
Relative status*Not working			2.45*** (1.73 - 3.47)						
Unemployment rate (cent.)				1.01 (0.99–1.04)	1.02 (0.99–1.04)	1.00 (0.95–1.06)	1.01 (0.96–1.07)	1.02 (0.96–1.08)	1.03 (0.97–1.08)
Relative status*Unemployment rate					0.96 (0.92 - 1.01)				
Parents' SEI		1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)				
Years of education	0.95*** (0.92–0.97)	0.94*** (0.91–0.97)	0.94*** (0.92–0.97)	0.94*** (0.91–0.97)	0.94*** (0.91–0.97)	0.98 (0.93–1.03)	0.94* (0.88–1.00)	0.91*** (0.86–0.97)	0.90*** (0.84–0.96)
Married	2.56*** (2.23–2.93)	2.56*** (2.23–2.93)	2.58*** (2.25–2.96)	2.56*** (2.23–2.93)	2.56*** (2.23–2.93)	1.59*** (1.24–2.02)	2.64*** (2.01–3.48)	3.08*** (2.32–4.07)	4.40*** (3.14–6.17)
Cohort 1978–87	0.98 (0.86–1.11)	0.98 (0.86–1.11)	0.96 (0.85–1.09)	0.96 (0.85–1.10)	0.97 (0.85–1.10)	0.86 (0.66–1.12)	0.96 (0.74–1.25)	1.00 (0.77–1.31)	1.12 (0.86–1.47)
Cohort 1988–99	0.86 (0.70–1.06)	0.86 (0.70–1.07)	0.84 (0.68–1.04)	0.85 (0.68–1.05)	0.85 (0.68–1.05)	0.77 (0.53–1.12)	0.75 (0.50–1.14)	0.94 (0.60–1.49)	0.94 (0.56–1.59)
One sibling	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.02 (0.57–1.84)	1.07 (0.61–1.86)	1.38 (0.81–2.34)	0.93 (0.59–1.46)
Two siblings	1.10 (0.85–1.43)	1.11 (0.85–1.43)	1.10 (0.85–1.43)	1.11 (0.85–1.44)	1.11 (0.86–1.44)	1.04 (0.59–1.84)	1.19 (0.68–2.07)	1.14 (0.67–1.95)	1.22 (0.77–1.93)
Three siblings	1.18 (0.90–1.56)	1.20 (0.91–1.57)	1.19 (0.91–1.57)	1.20 (0.91–1.58)	1.20 (0.91–1.58)	1.47 (0.82–2.62)	1.40 (0.79–2.47)	0.96 (0.53–1.72)	1.07 (0.63–1.80)
Four or more siblings	1.24 (0.94–1.63)	1.25 (0.95–1.65)	1.25 (0.95–1.64)	1.25 (0.95–1.65)	1.25 (0.95–1.65)	1.23 (0.69–2.18)	1.32 (0.75–2.34)	1.20 (0.68–2.13)	1.85** (1.06–3.23)
African American	1.08 (0.93–1.25)	1.09 (0.94–1.26)	1.09 (0.94–1.26)	1.08 (0.94–1.25)	1.08 (0.94–1.25)	1.08 (0.73–1.25)	1.08 (0.81–1.43)	1.29 (0.95–1.76)	0.97 (0.68–1.39)
Other ethnicity	1.16 (0.93–1.45)	1.16 (0.93–1.45)	1.18 (0.95–1.47)	1.16 (0.93–1.44)	1.17 (0.93–1.45)	1.36* (0.95–1.95)	0.80 (0.49–1.30)	0.86 (0.51–1.46)	1.28 (0.77–2.13)
Subject	2956	2956	2956	2956	2956	2956	2956	2956	2956
N	218,348	218,348	218,348	218,348	218,348	51,503	57,657	55,511	53,677

Source: Elaboration of the author based on PSID (2003–2017) data. Note: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.



**Fig. 4.** Predicted hazard of first birth at specific covariate values. Downward, immobile and upward mobile occupations.

Source: Elaboration of the author based on PSID (2003–2017) data.

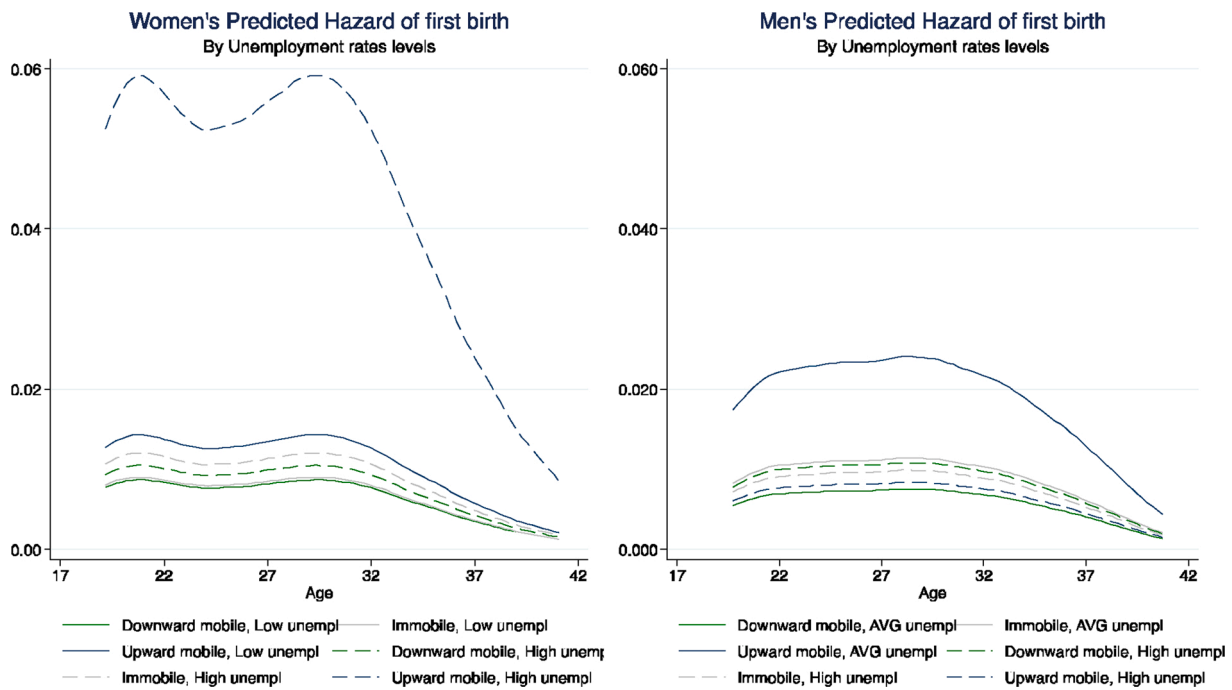


Fig. 5. Predicted hazard of first birth at specific covariate values. Downward, immobile and upward mobile occupations, at low or high unemployment rates. Source: Elaboration of the author based on PSID (2003–2017) data.

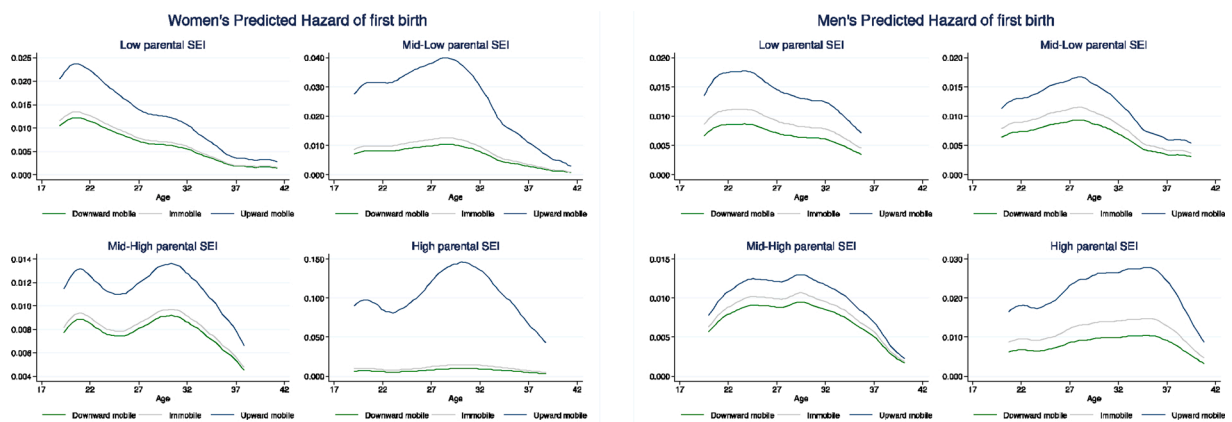


Fig. 6. Survival curves to first birth at specific covariates by parental SEI. Source: Elaboration of the author based on PSID (2003–2017) data.

for men the risk of fatherhood peaks around the age of 28. Tables 1,2 shows that the risk of first birth is much lower for non-working men and women who did not work earlier (No work coefficient Model 3) but if they are not currently working but have worked before in a job with a high relative status (interaction coefficient, Model 3) they display an even higher risk of having a first child compared to those who are currently working. This might be related to the specificity of the American context where there is little or no public support to childbearing and the cost of parenthood falls entirely on parents. Upward mobile men and women, who dispose of the enough financial resources, might take the opportunity of a career break to have a child. However, since we do not know the reason for not being working (inactivity or unemployment), it is difficult to draw definite conclusions. As far as the controls are concerned, being married is associated with a twice as much greater risk of childbearing among both men and women, while higher education seems to lead to a postponement of first birth especially among women. Younger cohorts enter parenthood significantly later than those born before 1988 do. Net of the other

covariates, having two siblings is associated with a faster transition to first birth among women. Compared to White non-Hispanic women, African American men and women have slightly higher odds of first birth, while women of other ethnicities display lower (men higher) odds, as is typically reported in official statistics (Mathews and Hamilton, 2019) but the estimates are not statistically significant. Parental SEI does not affect the risk of first birth beyond its effects through women's relative occupational status, although including the variable in the model with demographic controls increases the odds ratios of relative status (Models 1-2, Table 1,2). Higher aspirations are more difficult to reach and maintain, and not controlling for this would underestimate the effect that exceeding these aspirations, by obtaining a satisfying job, has on the transition to motherhood.

State unemployment rate is weakly associated with the transition to



parenthood<sup>9</sup> and the inclusion of the aggregate labor market indicator does not alter the positive association between relative status and the risk of first birth (Model 4, Table 1,2). Model 5 (Table 1,2) show that there are gender heterogeneities though in the interaction between relative status and local labor market conditions. Interaction terms are not statistically significant but their sign suggest that as unemployment rates increase, the positive association between reaching aspirations and motherhood increases, while the association with fatherhood declines. Fig. 5 plots this into six profiles combining the same hypothetical occupational mobility scenarios presented in Fig. 4 with two unemployment rate scenarios (low, around 3%, and high unemployment rates, around 10%). The solid lines indicate occupational episodes taking place at low unemployment levels, while the dashed lines indicate occupational episodes taking place when unemployment rate is high. As for Fig. 4, the results are plotted for working White married women; all other controls are set at the mean. Fig. 5 illustrates that the advantage of upward mobile, relative to downward mobile women, in the risk of motherhood increases when unemployment rates are high relative to low, while it decreases for men.

Finally, running separate models by parental socioeconomic status (Model 6–9, Table 1,2, and Fig. 6) shows that reaching occupational aspirations increases the risk of first birth in all social origin groups, hence irrespectively of the level of aspiration to be reached. More in details, the difference in the risk of first birth between upward and downward mobile women is especially large and more persistent over the reproductive life course for high social origin women. The difference is instead smaller for women with mid-high socioeconomic status parents. For men, reaching aspirations is more positively associated to parenthood among those with parents in either the lowest or highest social group while the weakest (and not statistically significant) relationship is in the middle social origin groups. For both men and women, the highest the aspirations the more important it is to reach them to have a child. For men only, upward occupational mobility is also important when coming from a low social origin.

Very similar results are obtained after a few robustness checks, reported in Tables A3, A4. First, setting aspirations exactly equal to the socioeconomic status of parents instead of as a function of it, using a categorical variable for relative occupational status instead of linear, does not alter results (Model 1), although point estimates are smaller and statistically significant only for women. Second, controlling for first occupation relative status yields identical estimates (Model 2). Third, using a dummy variable for the Great Recession period instead of local unemployment (Model 3) gives very similar results for women, namely upward mobility becomes more positively associated to first birth after 2008. For men, results become stronger and the interaction term statistically significant: men's upward mobility is less positively associated to first birth after 2008 than earlier. Fourth, using labor force participation rates instead of unemployment (Models 4-5) does not alter the finding on relative status. However, LFPR per se is not (statistically and substantially) significantly associated to first birth net of other covariates. Fifth, adding a state fixed effect to control for any other geographical characteristic of the state of residence other than the unemployment rate, also gives identical results or even a stronger positive association between high relative status and the risk of first birth (Models 6). Given that in the oldest cohort, men and women are older than 30 in 2008, meaning past the mean age at first birth in the US, they might have been less affected by the Great Recession. While previous studies have shown that in the US even women close to their reproductive lives postponed first births because of the crisis (Comolli and Bernardi, 2015), the overall effect on them might be smaller and driving estimates down. Including only the two youngest cohorts gives identical

(stronger for women) results (Model 7). Finally, it is important to check that by imputing joblessness spells with previous occupation's SEI we are not introducing any bias. The fact that results do not change when including only working men and women guarantees that (Models 8).

## 5. Discussion

This paper investigates the effect of conflict between occupational status and aspirations on the transition to first birth among American men and women during the recent decade plagued by the Great Recession. Richard Easterlin (1976, 1987) argued that childbearing decisions are driven not by the individual's absolute socioeconomic status but by the ratio between that and aspirations. The latter are formed during adolescence, and are based on the socioeconomic status of their parents. Due to the recession, in the last decade the numerator of this ratio, the socioeconomic status based on occupational achievements, was affected by growing labor market uncertainty. Beyond the possibility of becoming unemployed, during periods of higher employment insecurity individuals are more likely to accept jobs for which they are over-qualified and thus might be more likely to find themselves socioeconomically downward-mobile with respect to their aspirations.

The first aim of this study was to test the Easterlin Hypothesis of relative socioeconomic status in relation to entry into parenthood during a period of high labor market uncertainty. The second aim was to investigate the hypothesis of an interplay between aggregate conditions of the economy and, in the present case, the change in individual-level relative occupational status. On the one hand, the Great Recession might have magnified the feeling of uncertainty multiplying the (presumably) negative impact of low relative socioeconomic status on family formation. On the other hand, it is possible that when everyone's opportunities decline in parallel, one's own relative status may matter less, attenuating the differences in childbearing chances between those who reach a satisfying occupational position and those who do not.

Using the eight most recent waves of US Panel Study of Income Dynamics (PSID 2003–2017) and a Cox proportional model I estimate the effect of relative socioeconomic status on the hazard of having the first child among American men and women. Results support the Easterlin Hypothesis. For both men and women, the better the comparison between their own socioeconomic status and that of their parents when they were adolescent, the higher is their risk of first birth. The advantage of a high relative status job is especially large at the beginning of the career, before their mid-30s. These findings are strongly robust to the inclusion of demographic controls, education, marital status, parental socioeconomic status and local labor market conditions, and to different model specifications.

The second hypothesis of local labor market conditions moderating the relationship between relative status and first birth is only weakly supported and strong gender differences emerge. When local labor market conditions deteriorate, reaching socioeconomic aspirations tends to become more important for women and less for men as a precondition to enter parenthood. In other words, rising unemployment rates tend to attenuate differences in risk of fatherhood between men who reach their occupational aspirations and those who do not. On the contrary, rising unemployment rates further increase the advantage in the risk of entering motherhood among women who reach the socioeconomic status of their parents compared to downward mobile women. This contrasts with the findings of Yu and Sun (2018) according to whom advantaged women do not delay childbearing in response to aggregate unemployment. However, high achieving women here are not high social origin women necessarily since the results are net of parental social status and their own educational level. High achieving women in the current study are women who reach an equal or better job that their aspirations and therefore are more sensitive to labor market fluctuations compared to women who live the privilege of a high social origin and might have a safety net that protects them from aggregate labor market risk. It is important to note though that interactions are quite small in

<sup>9</sup> Further analyses (not shown) demonstrate that the relationship is actually inverted U-shaped: the risk of first birth declines at very high state unemployment rates.

magnitude and not statistically significant. Therefore, definite conclusions cannot be drawn and more evidence on the moderating role of local economic conditions is needed.

This study suffers from a few limitations. First, the lack of information on partners is problematic insofar as the decision to have a baby tends to be a couple's decision, and the labor market position and occupational status of the partner would influence this choice. However, since the model is already quite complex, I decided not to add partners' status too. Future studies building on the current one, should take into consideration both partners' occupational positions. The second limitation concerns the impossibility to distinguish between episodes of unemployment and episodes of voluntary exit from the labor force during career breaks between jobs. The two cases of non-working are very differently related to family decisions, especially among women. However, as the main focus here is on working spells, this issue should not compromise the main findings. In fact, robustness checks conducted excluding joblessness episodes, produce identical results. Third, unemployment rate represents only one aspect of aggregate economic uncertainty. While indicators such as poverty rates or inequality indexes could have informed the analyses on additional facets of the insecurity generated by the Great Recession, they are not available at the state level and month frequencies for such a long period of time, as the one covered in this study. Fourth, this study could only identify associational and not causal evidence of the relationship between relative status and transition to first birth. Unobserved characteristics not included among the covariates might intervene in the process studied. Finally, it is important to note that those who come from the bottom of the socioeconomic distribution cannot be downward mobile (floor effect), as well as, those who come from the highest cannot be upward mobile (ceiling effect). However, the continuous character of the relative socioeconomic status variable, and modelling immobility and upward mobility together, should moderate these issues.

Despite these limitations, this study contributes to the literature in several ways. First, this paper contributes to the rich literature on the impact of business cycles on childbearing behavior, by investigating the overlooked mechanism of the conflict between resources and aspirations. Second, the paper shows that Easterlin's theory of relative

socioeconomic status still holds in contemporary US. The better the comparison between disposable resources and aspirations formed during adolescence in the family of origin, the higher the hazard of having a first child. Third, no strong evidence of adaptation or multiplicative negative effect of worsening local labor market opportunities emerge. On the one hand, men and women in jobs that do not match their aspirations seems to be insensitive to aggregate labor market conditions. On the other hand, women who reach a job that matches their aspirations during periods of uncertain local labor market conditions, anticipate childbearing even more than when labor markets are solid. More than a negative multiplicative effect on the downward mobile women, this finding suggests that the crisis aggravated existing childbearing inequalities by increasing the advantage of the high achieving women. Men instead, who normally would also anticipate childbearing when reaching their occupational aspiration, tend to not do so if labor market conditions worsen. Differences in the risk of fatherhood between upward and downward mobile men are thus attenuated by the reduced advantage of the high achieving men.

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**Appendix A**

Table A1, A2

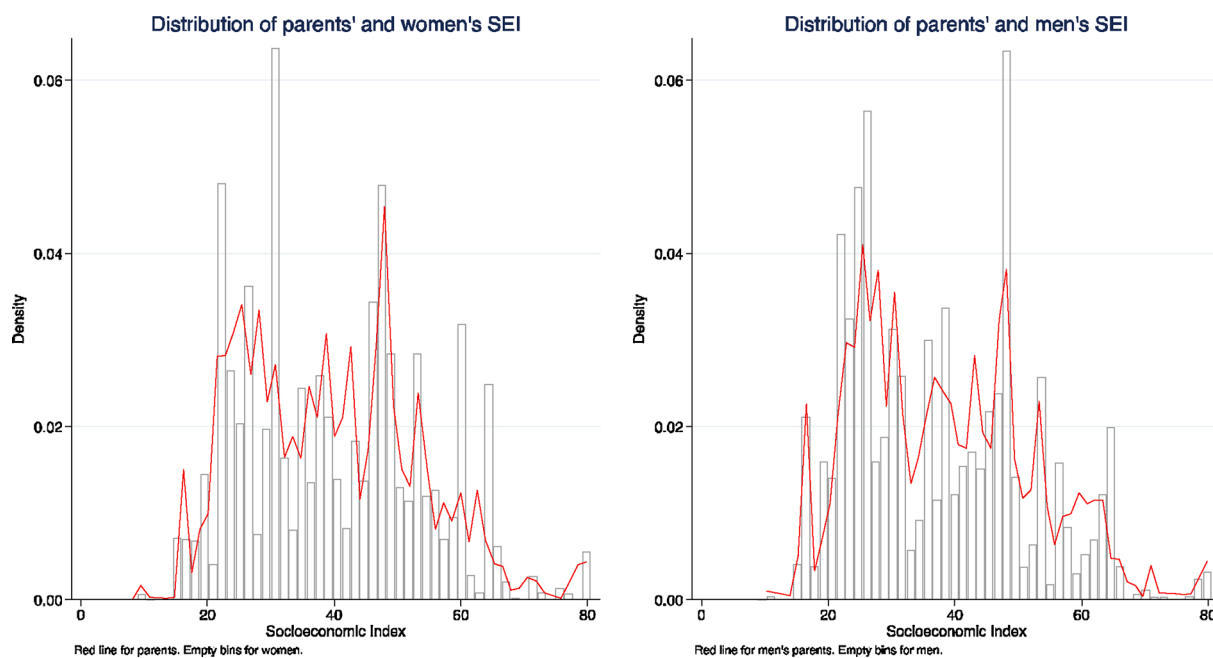


Fig. A1. Distribution of parents' and women's SEI. Source: Elaboration of the author based on PSID (2003–2017) data.

**Table A1**  
Occupation Titles and Codes (CENSUS 2002).

Quartile	SEI	Occupation title general	Occupation title specific	3-digit Census 2002 Occupations code
1	<25.9	Service occupations (Unskilled manual)	Food Preparation and Serving Occupations	400–416
			Building and Grounds Cleaning and Maintenance Occupations	420–425
			Personal Care and Service Occupations	430–465
			Farming, Fishing, and Forestry Occupations	600–613
			Construction Trades	620–676
2	26–35	Precision production craft and repair occupations (Skilled manual)	Extraction Workers	680–694
			Installation, Maintenance, and Repair Workers	700–762
			Production Occupations	770–896
			Community and Social Services Occupations	200–206
			Legal Occupations	210–215
			Education, Training, and Library Occupations	220–255
			Arts, Design, Entertainment, Sports, and Media Occupations	260–296
3	35–47	Sales, technical and administrative support (Unskilled service)	Healthcare Practitioners and Technical Occupations	300–354
			Healthcare Support Occupations	360–365
			Protective Service Occupations	370–395
			Sales Occupations	470–496
			Office and Administrative Support Occupations	500–593
			Management Occupations	1–43
			Business Operations Specialists	50–73
			Financial Specialists	80–95
			Computer and Mathematical Occupations	100–124
			Architecture and Engineering Occupations	130–156
4	>48	Managerial and specialty occupations (Skilled service)	Life, Physical, and Social Science Occupations	160–196

Source: Census of Population and Housing: Alphabetical Index of Industries and Occupations, issued by the U.S. Department of Commerce and Census Bureau.

**Table A2**  
Summary Statistics.

(a)							
	Obs	Mean	Std.Dev.	Min	Max		
<b>Women</b>							
Date (Month, Year)	184,672	587.12	67.25	313 (Jan 1986)	695 (Nov 2017)		
First birth	68,234	604.33	57.76	344 (June 1988)	693 (Sept 2017)		
First conception	68,234	592.33	57.76	332 (June 1987)	681 (Sept 2016)		
Birth year	184,672	1981.41	6.71	1968	1999		
Years of education	184,672	14.6	1.99	1	17		
State unemployment rate	18,4672	6.25	2.13	2.1	14.6		
Women's SEI	172,618	40.25	14.06	7.55	80.5		
Women's SEI first occupation	152,265	34.65	13.93	7.15	74.69		
Parents' SEI	184,638	38.35	13.44	7.55	80.5		
Relative SEI	180,327	1.15	.54	.22	6.68		
<b>Men</b>							
Date (Month, Year)	218,348	581.07	72.08	303 (Mar 1985)	695 (Nov 2017)		
First birth	72,374	595.5	60.76	355 (May 1989)	693 (Sept 2017)		
First conception	72,374	583.5	60.76	343 (May 1988)	681 (Sept 2016)		
Birth year	218,348	1980.18	6.73	1968	1999		
Years of education	218,348	13.79	2.16	1	17		
State unemployment rate	218,348	6.17	2.09	2.1	14.6		
Women's SEI	202,550	37.59	13.94	7.55	80.5		
Women's SEI first occupation	184,225	29.83	14.01	7.15	77.58		
Parents' SEI	218,348	37.9	13.33	9.56	80.5		
Relative SEI	210,634	1.08	.49	.14	3.98		
<b>(b)</b>							
Variables	Categories	Women N	%	Cum.	Men N	%	Cum.
Cohort	1968–77	52662	28.52	28.52	78704	36.05	36.05
	1978–87	95270	51.59	80.11	107190	49.09	85.14
	1988–99	36740	19.89	100.00	32454	14.86	100.00
	Tot.	184672			218348		
Married	Unmarried	79442	43.02	43.02	98148	44.95	44.95
	Married	105230	56.98	100.00	120200	55.05	100.00
	Tot.	184672			218348		
Siblings	No siblings	12819	6.94	6.94	14378	6.58	6.58
	One sibling	60025	32.50	39.45	70478	32.28	38.86
	Two siblings	52754	28.57	68.01	63222	28.95	67.82
	Three siblings	29659	16.06	84.07	34420	15.76	83.58
	Four or more siblings	29415	15.93	100.00	35850	16.42	100.00

(continued on next page)

Table A2 (continued)

	Tot.	184672			218348		
Race	White	128936	69.82	69.82	155117	71.04	71.04
	African-American	44153	23.91	93.73	50264	23.02	94.06
	Other	11583	6.27	100.00	12967	5.94	100.00
	Tot.	184672			218348		
House ownership	Not house owner	113523	61.47	61.47	133296	61.05	61.05
	House owner	71149	38.53	100.00	85052	38.95	100.00
	Tot.	184672			218348		
Not working	Working	172618	93.47	93.47	202567	92.77	92.77
	Not working	12054	6.53	100.00	15781	7.23	100.00
	Tot.	184672			218348		
Relative SEI categorical	Not working	4345	2.35	2.35	7714	3.53	3.53
	SES lower than parents	80571	43.63	45.98	107089	49.05	52.58
	SES at least equal to parents	99756	54.02	100.00	103545	47.42	100.00
	Tot.	180327			218348		
Parents' quartiles SEI	Low parental SEI	44025	23.84	23.84	51503	23.59	23.59
	Mid-Low parental SEI	45644	24.72	48.56	57657	26.41	49.99
	Mid-High parental SEI	47167	25.54	74.10	55511	25.42	75.42
	High parental SEI	47836	25.90	100.00	53677	24.58	100.00
	Tot.	180327			218348		

Source: Elaboration of the author based on PSID (2003–2017) survey.

Table A3  
Cox model for the hazard for first birth. Robustness checks. Women.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
Non-downward-mobile job	1.12* (1.00–1.25)							
Relative status		1.21*** (1.05–1.38)	1.14 (0.97–1.34)	1.22*** (1.07–1.39)	1.22*** (1.07–1.39)	1.24*** (1.09–1.42)	1.22** (1.05–1.42)	1.14* (0.99–1.30)
First job relative status		1.00 (1.00–1.00)						
Post-October 2008			0.96 (0.81–1.13)					
Post-October 2008*Relative status			1.16 (0.95–1.41)					
Labor Force Participation rate (cent.)				1.00 (0.98–1.01)	1.00 (0.98–1.01)			
Labor Force Participation rate*Relative status					1.00 (0.97–1.03)			
Unemployment rate (cent.)						1.04** (1.01–1.07)	1.03** (1.00–1.07)	1.03* (1.00–1.05)
Unemployment rate*Relative status						1.02 (0.98–1.07)	1.01 (0.95–1.06)	1.03 (0.98–1.08)
Not working		0.51*** (0.36–0.70)	0.50*** (0.36–0.69)	0.51*** (0.37–0.70)	0.51*** (0.37–0.70)	0.51*** (0.37–0.70)	0.57*** (0.40–0.80)	
Parents' SEI		1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (0.99–1.01)	1.00 (1.00–1.01)
Years of education	0.91*** (0.89–0.94)	0.90*** (0.87–0.93)	0.90*** (0.87–0.93)	0.90*** (0.87–0.93)	0.90*** (0.87–0.93)	0.90*** (0.87–0.93)	0.86*** (0.82–0.89)	0.91*** (0.88–0.94)
Married	1.99*** (1.74–2.28)	2.00*** (1.75–2.29)	1.98*** (1.73–2.27)	1.99*** (1.74–2.27)	1.99*** (1.74–2.27)	1.93*** (1.68–2.21)	2.17*** (1.87–2.52)	2.00*** (1.75–2.29)
Cohort 1978–87	1.02 (0.88–1.17)	1.05 (0.91–1.21)	1.07 (0.91–1.27)	1.05 (0.91–1.21)	1.05 (0.91–1.21)	1.01 (0.87–1.17)	1.33*** (1.12–1.57)	0.99 (0.86–1.15)
Cohort 1988–99	0.81** (0.66–0.99)	0.83* (0.68–1.02)	0.90 (0.68–1.20)	0.84 (0.68–1.04)	0.84 (0.68–1.04)	0.80** (0.65–0.99)		0.78** (0.63–0.96)
One sibling	1.13 (0.87–1.47)	1.18 (0.91–1.54)	1.13 (0.87–1.47)	1.14 (0.88–1.47)	1.14 (0.88–1.47)	1.11 (0.86–1.44)	1.07 (0.79–1.46)	1.13 (0.88–1.47)
Two siblings	1.26* (0.97–1.63)	1.28* (0.98–1.66)	1.25* (0.96–1.62)	1.26* (0.97–1.63)	1.26* (0.97–1.63)	1.25* (0.96–1.62)	1.20 (0.88–1.64)	1.26* (0.97–1.63)
Three siblings	1.23 (0.94–1.62)	1.26 (0.95–1.67)	1.23 (0.93–1.61)	1.23 (0.94–1.62)	1.23 (0.94–1.62)	1.23 (0.90–1.56)	1.16 (0.84–1.61)	1.22 (0.93–1.60)
Four or more siblings	1.27* (0.96–1.67)	1.26 (0.95–1.67)	1.24 (0.94–1.63)	1.25 (0.95–1.65)	1.25 (0.94–1.65)	1.21 (0.91–1.60)	1.21 (0.87–1.69)	1.26 (0.95–1.66)
African American	1.06 (0.91–1.23)	1.08 (0.93–1.26)	1.06 (0.91–1.23)	1.05 (0.90–1.22)	1.05 (0.90–1.22)	0.95 (0.79–1.13)	1.07 (0.90–1.27)	1.04 (0.90–1.21)
Other ethnicity	0.93 (0.74–1.18)	0.92 (0.73–1.18)	0.91 (0.72–1.16)	0.91 (0.72–1.15)	0.91 (0.72–1.15)	0.91 (0.71–1.16)	0.84 (0.63–1.11)	0.90 (0.71–1.15)
State Fixed Effects	No	No	No	No	No	Yes	No	No
Only Younger cohorts	No	No	No	No	No	No	Yes	No
Only working men	No	No	No	No	No	No	No	Yes
Subjects	2709	2709	2709	2709	2709	2709	2709	2709
N	184,672	177,008	184,672	184,672	184,672	184,672	132,010	180,327

Source: Elaboration of the author based on PSID (2003–2017) survey. Note: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table A4**  
Cox model for the hazard for first birth. Robustness checks. Men.

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
Non-downward-mobile job	1.07 (0.95–1.19)							
Relative status		1.27*** (1.10–1.47)	1.39*** (1.19–1.62)	1.26*** (1.10–1.44)	1.26*** (1.11–1.45)	1.28*** (1.11–1.46)	1.17* (0.98–1.40)	1.15* (1.00–1.32)
First job relative status		1.00 (1.00–1.00)						
Post-October 2008			0.89 (0.76–1.05)					
Post-October 2008*Relative status			0.76** (0.61–0.94)					
Labor Force Participation rate (cent.)				1.01 (0.99–1.03)	1.01 (0.99–1.03)			
Labor Force Participation rate*Relative status					1.02 (0.99–1.05)			
Unemployment rate (cent.)						1.03* (1.00–1.06)	1.04** (1.00–1.07)	1.01 (0.99–1.04)
Unemployment rate*Relative status						0.96 (0.92–1.01)	0.98 (0.92–1.03)	0.97 (0.92–1.02)
Not working		0.51*** (0.36–0.71)	0.50*** (0.36–0.70)	0.49*** (0.35–0.68)	0.49*** (0.35–0.69)	0.50*** (0.36–0.69)	0.58*** (0.40–0.84)	
Parents' SEI		1.01 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)	1.00 (1.00–1.01)
Years of education	0.95*** (0.93–0.98)	0.94*** (0.91–0.97)	0.94*** (0.91–0.97)	0.94*** (0.91–0.97)	0.94*** (0.91–0.97)	0.94*** (0.91–0.97)	0.90*** (0.87–0.93)	0.95*** (0.92–0.98)
Married	2.61*** (2.28–2.99)	2.59*** (2.25–2.98)	2.54*** (2.22–2.92)	2.55*** (2.23–2.92)	2.55*** (2.23–2.92)	2.58*** (2.25–2.96)	2.92*** (2.48–3.43)	2.60*** (2.27–2.98)
Cohort 1978–87	0.94 (0.83–1.07)	0.97 (0.85–1.11)	1.06 (0.91–1.24)	1.00 (0.87–1.14)	1.00 (0.88–1.14)	0.95 (0.83–1.09)	1.17 (0.97–1.43)	0.93 (0.82–1.07)
Cohort 1988–99	0.81* (0.66–1.00)	0.86 (0.69–1.07)	1.00 (0.75–1.32)	0.90 (0.72–1.13)	0.91 (0.73–1.13)	0.82* (0.66–1.02)		0.81** (0.65–1.00)
One sibling	1.05 (0.81–1.36)	0.96 (0.74–1.25)	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.05 (0.81–1.36)	1.06 (0.82–1.38)	1.06 (0.76–1.48)	1.05 (0.81–1.35)
Two siblings	1.11 (0.85–1.43)	1.05 (0.80–1.37)	1.10 (0.85–1.43)	1.10 (0.85–1.43)	1.11 (0.85–1.43)	1.11 (0.85–1.45)	0.98 (0.70–1.37)	1.11 (0.85–1.44)
Three siblings	1.19 (0.90–1.56)	1.15 (0.87–1.52)	1.19 (0.90–1.56)	1.19 (0.91–1.57)	1.20 (0.91–1.57)	1.21 (0.92–1.59)	1.09 (0.77–1.55)	1.19 (0.91–1.57)
Four or more siblings	1.25 (0.95–1.64)	1.17 (0.89–1.55)	1.24 (0.94–1.64)	1.24 (0.94–1.63)	1.24 (0.94–1.63)	1.24 (0.94–1.64)	1.27 (0.90–1.79)	1.25 (0.95–1.64)
African American	1.09 (0.94–1.26)	1.14* (0.98–1.32)	1.09 (0.94–1.26)	1.11 (0.96–1.29)	1.11 (0.96–1.29)	1.09 (0.92–1.30)	1.26*** (1.07–1.49)	1.09 (0.94–1.26)
Other ethnicity	1.18 (0.95–1.47)	1.16 (0.93–1.46)	1.16 (0.93–1.45)	1.17 (0.94–1.46)	1.17 (0.94–1.46)	1.20 (0.95–1.52)	1.19 (0.90–1.56)	1.17 (0.94–1.46)
State Fixed Effects	No	No	No	No	No	Yes	No	No
Only Younger cohorts	No	No	No	No	No	No	Yes	No
Only working men	No	No	No	No	No	No	No	Yes
Subjects	2956	2956	2956	2956	2956	2956	2956	2956
N	218,348	205,520	218,348	218,348	218,348	218,348	139,644	210,634

Source: Elaboration of the author based on PSID (2003–2017) survey. Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## References

- Aassve, A., Burgess, S., Propper, C., & Dickson, M. (2006). Employment, family union and childbearing decisions in Great Britain. *Journal of the Royal Statistical Society Series A, (Statistics in Society)*, 169(4), 781–804.
- Allison, P. D. (1984). *event history analysis. Regression for longitudinal event data* (Vol. 46). Sage Publications, Inc. University of Pennsylvania.
- Allison, P. D. (2010). Survival analysis. In G. Hancock, & R. O. Muelle (Eds.), *The reviewer's Guide to quantitative methods in the social sciences*.
- Ayllón, S. (2019). Job insecurity and fertility in Europe. *Review of Economics of the Household*, 1–27.
- Beller, E. (2009). Bringing intergenerational social mobility research into the twenty-first century: Why mothers matter. *American Sociological Review*, 74(4), 507–528.
- Beller, E., & Hout, M. (2006). Intergenerational social mobility: The United States in comparative perspective. *The Future of Children*, 19–36.
- Bernardi, F. (2007). Mobilità sociale e fertilità: Un'analisi della transizione al primo figlio per gli uomini italiani nati nel secolo scorso. *Polis*, 2, 277–294.
- Billingsley, S. (2011). Economic crisis and recovery: Changes in second birth rates within occupational classes and educational groups. *Demographic Research*, 24, 375–406.
- Billingsley, S., Drefahl, S., & Ghilagaber, G. (2016). Diagonal reference models in longitudinal analyses of fertility and mortality. *Stockholm Research Reports in Demography*, 24.
- Billingsley, S., & Matysiak, A. (2018). Social mobility and family expansion in Poland and Russia during socialism and capitalism. *Advances in Life Course Research*, 36, 80–91.
- Blanchard, O., & Summers, L. (1986). Hysteresis and the European unemployment problem. *NBER Macroeconomics Annual*, 1, 15–78.
- Blossfeld, H. P., & Mills, M. (2003). Globalization, Uncertainty and changes in early life courses. *Zeitschrift FÄ/r Erziehungswissenschaft*, 6(2), 188–218.
- Boudon, R. (1974). *Education, opportunity, and social inequality: Changing prospects in western society*. New York: Wiley.
- Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society*, 9(3), 275–305.
- Busetta, A., Mendola, D., & Vignoli, D. (2019). Persistent joblessness and fertility intentions. *Demographic Research*, 40, 185–218.
- Cefalu, M. (2011). Pointwise confidence intervals for the covariate-adjusted survivor function in the Cox model. *The Stata Journal*, 11(1), 64–81.
- Cherlin, A., Cumberworth, E., Morgan, S. P., & Wimer, C. (2013). The effects of the great recession on family structure and fertility. *The Annals of the American Academy of Political and Social Science*, 650(1), 214–31.
- Clark, A. E. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of Labor Economics*, 21(2), 323–351.
- Clark, A. E., Knabe, A., & Rätzl, S. (2010). Boon or bane? Others' unemployment, well-being and job insecurity. *Labour Economics*, 17(1), 52–61.
- Comolli, C. L. (2017). The fertility response to the Great Recession in Europe and the United States: Structural economic conditions and perceived economic uncertainty. *Demographic research*, 36, 1549–1600.
- Comolli, C. L., & Bernardi, F. (2015). The causal effect of the great recession on childlessness of white American women. *IZA Journal of Labor Economics*, 4(1), 1–24.
- Comolli, C. L., & Vignoli, D. (2021). Spread-ing uncertainty, shrinking birth rates. *European Sociological Review*. forthcoming.
- Danziger, S. (2013). Evaluating the effects of the great recession. *The Annals of the American Academy of Political and Social Science*, 650(1), 6–24.

- De Lange, M., Wolbers, M. H., Gesthuizen, M., & Ultee, W. C. (2014). The impact of macro- and micro-economic uncertainty on family formation in the Netherlands. *European Journal of Population*, 30(2), 161–185.
- Duncan, O. D., Freedman, R., Coble, J. M., & Slesinger, D. P. (1965). Marital fertility and size of family of orientation. *Demography*, 2(1), 508–515.
- Easterlin, R. A. (1976). The conflict between aspirations and resources. *Population and Development Review*, 2, 417–425.
- Easterlin, R. A. (1987). *Birth and fortune* (2nd edn.). Chicago: University of Chicago Press.
- Fasang, A. E., & Raab, M. (2014). Beyond transmission: Intergenerational patterns of family formation in middle class American families. *Demography*, 51, 1703–1728.
- Goldthorpe, J. H. (1996). Class analysis and the reorientation of class theory: The case of persisting differentials in educational attainment. *The British Journal of Sociology*, 47(3), 481–505.
- Guo, G. (1993). Event-history analysis for left-truncated data. *Sociological Methodology*, 23, 217–243.
- Hauser, R. M., & Warren, J. R. (1997). Socioeconomic indexes for occupations: A review, update, and critique. *Sociological Methodology*, 27(1), 177–298.
- Kasarda, J. D., & Billy, J. O. (1985). Social mobility and fertility. *Annual Review of Sociology*, 11(1), 305–328.
- Kohler, H. P., & Kohler, I. (2002). Fertility decline in Russia in the early and mid 1990s: The role of economic uncertainty and labour market crises. *European Journal of Population/Revue européenne de Démographie*, 18(3), 233–62.
- Kravalda, Ø. (2002). The impact of individual and aggregate unemployment on fertility in Norway. *Demographic Research*, 6, 263–294.
- Kreyenfeld, M. (2010). Uncertainties in female employment careers and the postponement of parenthood in Germany. *European sociological review*, 26(3), 351–366.
- Kreyenfeld, M., & Andersson, G. (2014). Socioeconomic differences in the unemployment and fertility nexus: Evidence from Denmark and Germany. *Advances in Life Course Research*, 21, 59–73.
- Kreyenfeld, M., Andersson, G., & Pailhé, A. (2012). Economic uncertainty and family dynamics in Europe. *Demographic Research*, 27, 835–852.
- Lindbeck, A., Nyberg, S., & Weibull, J. W. (1999). Social norms and economic incentives in the welfare state. *The Quarterly Journal of Economics*, 114(1), 1–35.
- Livingston, G., & D'Veira, C. (2010). *The new demography of American motherhood*. Pew Research Center website.
- Lutz, W., Skirbekk, V., & Testa, M. R. (2006). The low-fertility trap hypothesis: Forces that may lead to further postponement and fewer births in Europe. *Vienna Yearbook of Population Research*, 167–192.
- Macunovich, D. J. (1998). Fertility and the Easterlin hypothesis: An assessment of the literature. *Journal of Population Economics*, 11(1), 53–111.
- Mathews, T. J., & Hamilton, B. E. (2019). Total Fertility Rates by State and Race and Hispanic Origin: United States, 2017. *National Vital Statistics Reports*, 68(1).
- McGonagle, K. A., Schoeni, R. F., Sastry, N., & Freedman, V. A. (2012). The Panel Study of Income Dynamics: Overview, Recent Innovations, and Potential for Life Course Research. *Longitudinal and Life Course Studies*, 3, 2.
- Meron, M., & Widmer, I. (2002). Les femmes au chômage retardent l'arrivée du premier enfant. *Population*, 57(2), 327–357.
- Murphy, M. (1999). Is the relationship between fertility of parents and children really weak? *Social Biology*, 46(1–2), 122–145.
- Murphy, M., & Wang, D. (2001). Family-level continuities in childbearing in low-fertility societies. *European Journal of Population/Revue européenne de Démographie*, 17(1), 75–96.
- Oesch, D., & Lipps, O. (2012). Does unemployment hurt less if there is more of it around? A panel analysis of life satisfaction in Germany and Switzerland. *European Sociological Review*, 29(5), 955–967.
- Olneck, M. R., & Wolfe, B. L. (1978). A note on some evidence on the Easterlin Hypothesis. *The Journal of Political Economy*, 86(5), 953–958.
- Oppenheimer, V. K. (1988). A theory of marriage timing. *The American Journal of Sociology*, 94(3), 563–591.
- Pampel, F. C. (1993). Relative cohort size and fertility: The socio-political context of the easterlin effect. *American Sociological Review*, 58, 496–514.
- Pampel, F. C., & Peters, H. E. (1995). The easterlin effect. *Annual Review of Sociology*, 21(1), 163–194.
- Schneider, D., & Hastings, O. P. (2015). Socioeconomic variation in the effect of economic conditions on marriage and nonmarital fertility in the United States: Evidence from the Great Recession. *Demography*, 52(6), 1893–1915.
- Seltzer, N. (2019). Beyond the Great Recession: Labor market polarization and ongoing fertility decline in the United States. *Demography*, 56(4), 1463–1493.
- Shimer, R. (2001). The impact of young workers on the aggregate labor market. *The Quarterly Journal of Economics*, 116, 969–1007.
- Skans, O. N. (2005). Age effects in Swedish local labor markets. *Economics Letters*, 86(3), 419–426.
- Sobel, M. E. (1985). Social mobility and fertility revisited: Some new models for the analysis of the mobility effects hypothesis. *American Sociological Review*, 699–712.
- Stevens, G. (1981). Social mobility and fertility: Two effects in one. *American Sociological Review*, 573–585.
- Thaning, M., & Hällsten, M. (2018). *The end of dominance? Evaluating measures of family background in stratification research*. Stockholm University. Sociology Working paper Series N. 34. ISSN 2002-7729.
- Thornton, A. (1980). The influence of first generation fertility and economic status on second generation fertility. *Population and Environment*, 3(1), 51–72.
- Vignoli, D. (2013). The role of work experience in shaping the entry into motherhood: A study for Italy. *Population Review*, 52, 2.
- Vignoli, D., Drefahl, S., & De Santis, G. (2012). Whose job instability affects the likelihood of becoming a parent in Italy? A tale of two partners. *Demographic Research*, 12(2), 41–62.
- Vignoli, D., Tocchioni, V., & Mattei, A. (2019). The impact of job uncertainty on first-birth postponement. *Advances in Life Course Research*.
- Vignoli, D., Tocchioni, V., & Salvini, S. (2016). Uncertain lives: Insights into the role of job precariousness in union formation in Italy. *Demographic Research*, 35(10), 253–282.
- Witte, H. D. (1999). Job insecurity and psychological well-being: Review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology*, 8(2), 155–177.
- Yu, W. H., & Sun, S. (2018). Fertility responses to individual and contextual unemployment: Differences by socioeconomic background. *Demographic Research*, 39, 927–962.