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### *Descriptive Finding*

**When working isn't enough: Family  
demographic processes and in-work poverty  
across the life course in the United States**

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## **When working isn't enough: Family demographic processes and in-work poverty across the life course in the United States**

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### **Abstract**

#### **BACKGROUND**

In-work poverty, a phenomenon that engenders social exclusion, is exceptionally high in the United States. The literature on in-work poverty focuses on occupational polarization, human capital, demographic characteristics, and welfare generosity. However, we have no knowledge on the effects of family demographic processes on in-work poverty across individuals' life courses.

#### **OBJECTIVE**

We estimate the risk of in-work poverty in the United States over the life course as a function of family demographic processes, namely leaving the parental home, union formation and dissolution, and the transition to parenthood.

#### **METHODS**

We use data from the 1979 National Longitudinal Survey of Youth (NLSY79) and fixed effects regression models with interactions between age and each family demographic process to estimate age-specific associations between these processes and the probability of in-work poverty.

#### **RESULTS**

In-work poverty is a common phenomenon across the life courses of our study cohort: 20% of individuals are at risk of in-work poverty at every age. However, the risk generally decreases for men and increases for women across the life course. Leaving the parental home, entering parenthood, and separation increase, while marriage decreases the risk of in-work poverty. While the associations between marital statuses and in-work poverty are stable over the life course, the associations between parental home leaving and fertility with in-work poverty vary by age.

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## **CONTRIBUTION**

Our findings demonstrate the importance of family demographic processes over and above traditional stratification factors for the risk of in-work poverty. Associations between family demographic processes and in-work poverty estimated for all age groups may be grossly underestimated.

## **1. Introduction**

In-work poverty is exceptionally high in the United States compared to most European countries despite a pervasive work-based anti-poverty strategy that was implemented in the early 1990s (Lichter and Crowley 2002). The working poor, employed individuals who live in households whose income is below the poverty threshold, represent a worrisome phenomenon that can engender social exclusion (Brady, Fullerton, and Moren Cross 2010). This paper aims to go beyond traditional institutional and social stratification approaches to studying in-work poverty by analyzing the role of family demographic processes in the risk of belonging to the working poor across the life course.

Economic restructuring, tertiarization, technological change, the polarization of skills and job opportunities, and welfare generosity are common macro-level factors that have been associated with in-work poverty in the literature (Hollister 2011; Lohmann 2009; Brady, Fullerton, and Moren Cross 2010). At the micro level, the most salient individual- and household-level characteristics associated with the probability of belonging to the working poor are gender, education, race, holding a part-time job, living in single-earner household, and heading a family with children (Kenworthy and Marx 2018; Crettaz 2013). However, to date no research has studied the association between family demographic processes and the probability of belonging to the working poor and whether these effects vary across the life course.

Seminal life-course studies have demonstrated that several salient family demographic processes are associated with poverty (Burkhauser and Duncan 1989; Bane and Ellwood 1986; Leisering and Leibfried 1999). In particular, as shown by more recent empirical findings, leaving the parental home (Berzin and de Marco 2010; Vandecasteele 2010; Aassve et al. 2007), separation and divorce (Mortelmans and Defever 2018; Harkness 2016), and the transition to parenthood (Hofferth and Goldscheider 2010) are positively associated with poverty. In contrast, being married seems to have a protective role (Gibson-Davis 2015; Brady and Burroway 2012).

Although these associations have also been found in the case of in-work poverty (Thiede, Lichter, and Sanders 2015; Kenworthy and Marx 2018), these studies lack a

systematic analysis of the effect heterogeneity of family transitions across the life course. The life-course approach suggests that the effect of specific events on the exposure to poverty is likely to depend on the age at which they occur (Elder 1994). For example, parenthood will have different effects on poverty risk for a young woman still in education compared to an adult in her 30s who completed education and established herself on the labor market. In turn, averaging across age groups may lead to severely under- or overestimated results.

We observe the life courses of individuals from age 18–50 who were born between 1957 and 1964 in the United States. This cohort entered the labor market during the late 1970s and early 1980s. During this period income inequality began increasing in the United States, earlier than in many European countries (Atkinson et al. 2017; DeNavas-Walt and Proctor 2014; Saez and Zucman 2016). Compared to previous cohorts that benefited from postwar economic expansion, the cohort we observe is the first whose labor market careers unfolded in a context shaped by the oil crises of the 1970s, deindustrialization, economic restructuring, and technological change. In sum, the employment life courses of our cohort were characterized by more labor market uncertainty than their predecessors. The consequent rise in the prevalence of in-work poverty has since fueled the public and political debate.

## **2. Data and methods**

We use the 1979 National Longitudinal Survey of Youth (NLSY79) to analyze the age-specific associations between family demographic processes and the probability of in-work poverty. The NLSY79 contains rich, prospective information on residency, education, income, and employment, as well as marital status and fertility. The original sample consists of 12,686 respondents born between 1957 and 1964 who were first interviewed in 1979 as 14–22-year-olds, collecting economic, sociological, and demographic information. Respondents were interviewed annually between 1979 and 1994, then biannually: the last wave available was collected in 2014. We restrict our analysis sample to men and women between age 18 and 50 who were employed for at least 26 weeks during the past year. Our analysis sample consists of 5,891 men contributing 66,983 person-years and 5,640 women contributing 59,354 person-years.

By relying on prospective information, the working poor are defined as individuals who are employed at least 26 weeks in the past year but nonetheless live in an at-risk-of-poverty household. We use the EUROSTAT guidelines to define the annual at-risk-of-poverty threshold as 60% of the median equivalized net household income. Our results are robust to different poverty thresholds, such as the absolute federal poverty

level and welfare reciprocity (see Thiede, Lichter, and Sanders 2015 for a discussion on conceptualization and measurement of working poor in the United States).

We include three family demographic processes in our analyses: leaving the parental home, union formation and dissolution, and parenthood. Specifically, we first estimate the age-specific associations between living outside the parental home compared to living in the parental home and in-work poverty. Then we estimate the association between living in a marital union compared to never have been married, as well as being separated compared to being married with the probability of belonging to the working poor. Unfortunately, we cannot include cohabitation in our analyses due to data limitations. For example, information on cohabitation was retrospectively collected during the 1990s if cohabitation preceded the current marriage or union. Finally, the associations between having one child and two or more children compared to not having any children with in-work poverty are estimated.

Fixed effects linear probability models with pooled standard errors and interactions between age and each family demographic process are used to estimate the age-specific associations. We model the probability of in-work poverty,  $y$ , of individual,  $i$ , at age,  $j$ , as a linear function of a family demographic event,  $f$ , individual age,  $a$ , and the interaction between that specific family demographic event and age, as well as the family demographic processes not included in the interaction and a number of controls. Formally, we use a time-demeaning transformation as a fixed-effects estimator:

$$(y_{ij} - \bar{y}_i) = \beta_1(f_{ij} - \bar{f}_i) + \beta_2(a_{ij} - \bar{a}_{ij}) + \beta_3(f_i - \bar{f}_{ij})(a_{ij} - \bar{a}_i) + (X_{it} - \bar{X}_i)' \beta + (u_{ij} - \bar{u}_i).$$

We chose a time-demeaning approach because other transformations are less efficient. For example, a first-differences transformation would lead to a more selective sample, as all observations without a transition would be excluded from the sample. With time demeaning, we retain the sample that we would have by estimating OLS regression with age-specific associations. Compared to these age-specific OLS regressions, our estimated coefficients are more conservative. We report the fixed-effects estimates rather than the OLS estimates because these enable an interpretation closer to the average effect that a family demographic transition has on an individual's probability to enter in-work poverty. Our results are additionally robust to alternative parametric specifications, i.e., logistic and probit regression models.

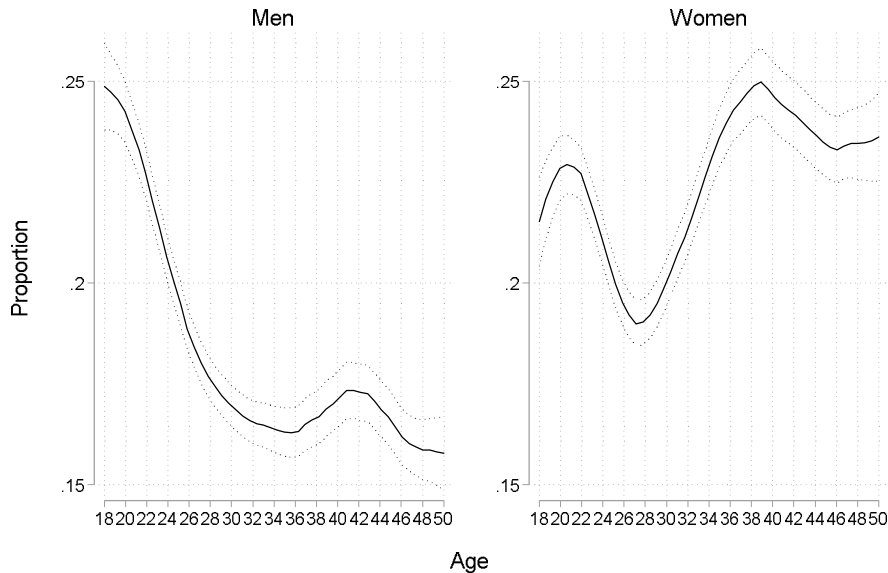
The noninteracted family demographic events, individual's educational attainment, average number of weekly work hours, urban versus rural residency, and occupational group are included as controls (see Autor and Dorn 2013 for harmonization of occupational codes). Note that we do not include an interaction between our marital status and parenthood indicators because we are interested in the effects of each family demographic process adjusted for the others. An interaction, although interesting,

would change the interpretation of our results, e.g., the association between marriage with one child and in-work poverty rather than the association between marriage and in-work poverty adjusted for parenthood. We do not report results separately by race because the association between family demographic processes and in-work poverty does not differ significantly by race.

### **3. Results**

In-work poverty is a remarkably common phenomenon at all stages of the life course in the United States. Figure 1 displays the proportion of US men and women born 1957–1964 that are employed, but nonetheless work in impoverished households from age 18–50. Note that the dashed lines represent 95% confidence intervals. As can be seen in the left panel of Figure 1, approximately 25% of employed 18-year-old men resided in an at-risk-of-poverty household. However, the proportion of working poor men drops dramatically between ages 20 and 35. By age 35, only 15% of men belong to the working poor. Women display a completely different pattern. The proportion of in-work-poverty women rises slightly between ages 18–20, but then decreases to just below 20% of the female working population. Strikingly, the percentage of working poor women then increases drastically from age 28–38 to 25%, rather than sinking, as was the case with men. Although slightly lower, the proportion of women after age 40 residing in an at-risk-of-poverty household remains stable just under 25%.

**Figure 1: Proportion of employed men and women in poverty over the life course in the United States, birth cohort 1957–1964**

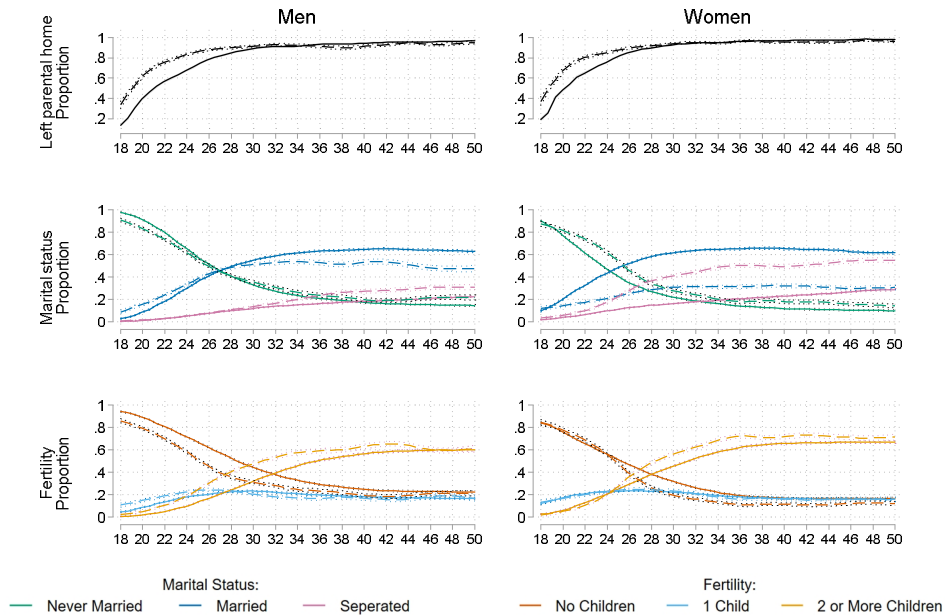


Source: NLSY79 data. Dotted lines: 95% confidence intervals.

Figure 2 displays the propensity of our family events of interest across the life course of the NLSY79 cohort among both the entire and the working poor population (solid and dotted lines respectively). Notably, working poor individuals leave the parental home at an earlier age. Living in the parental home can have different meanings across the life course: during young adulthood it might imply a loss in economic support by the family of origin, while it could be the solution to pool scarce resources and care for older parents later in the life course. Additionally, Figure 2 shows that women experiencing in-work poverty are more often separated and less often married across the whole life course compared to the entire population. For men, this difference is much less pronounced and emerges only after age 30. Finally, the transition to second-order fertility occurs at a younger age among working poor individuals.



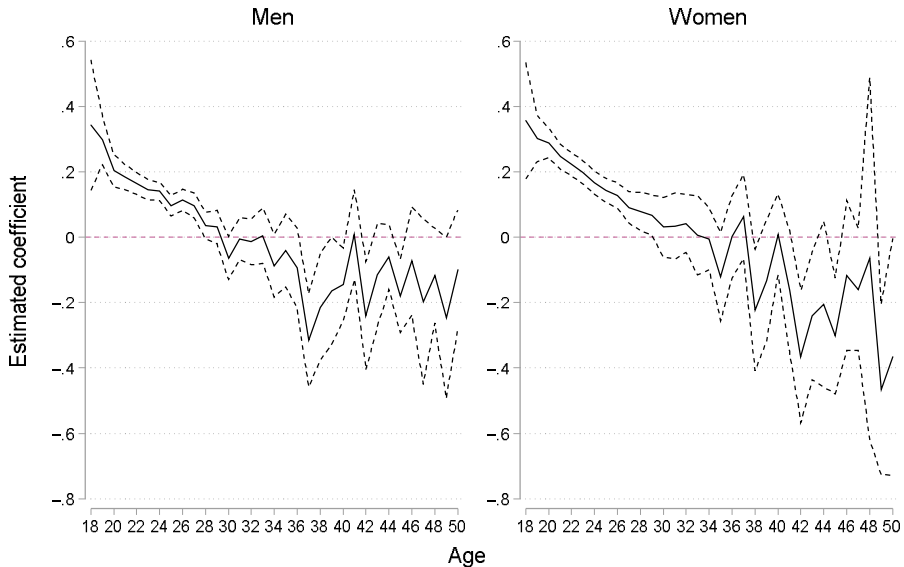
**Figure 2: Propensity of family events across the life course among the entire sample (solid lines) and the working poor population (dashed lines), birth cohort 1957–1964**



Source: NLSY79 data. Dotted lines: 95% confidence intervals.

We now consider the multivariate results from fixed effects regression models for the associations between family demographic processes and in-work poverty. The associations between parental home leaving – one of the crucial markers of the transition to adulthood – and in-work poverty across the life course are displayed in Figure 3. Percentage point changes in probabilities are displayed by the solid line. Again, the dotted lines represent 95% confidence intervals. For both men and women, leaving the parental home at a young age is associated with an approximately 30% age point higher probability of belonging to the working poor. The in-work poverty risk sinks linearly from age 18 to approximately age 28. Later in the life course the association becomes negative, but mostly not statistically significant.

**Figure 3: Age-specific associations between parental home leaving and the probability of in-work poverty, birth cohort 1957–1964**

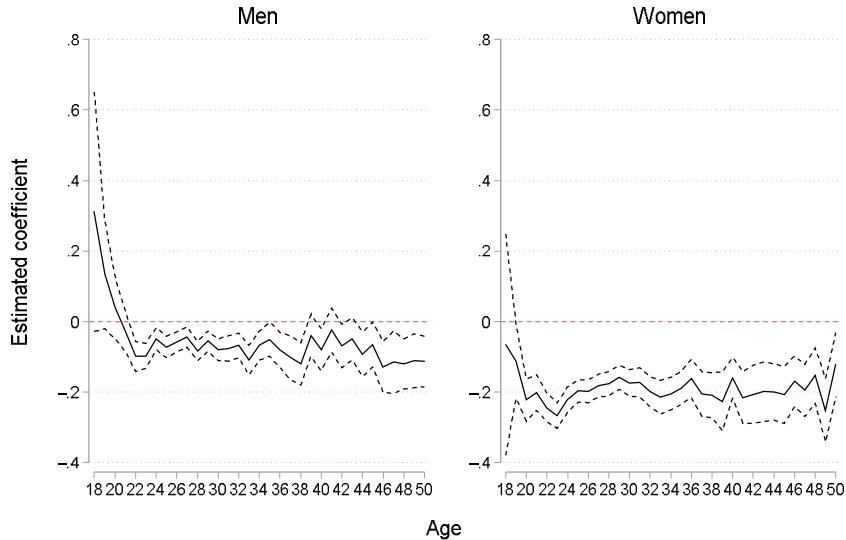


Source: NLSY79 data. Dashed lines: 95% confidence intervals.

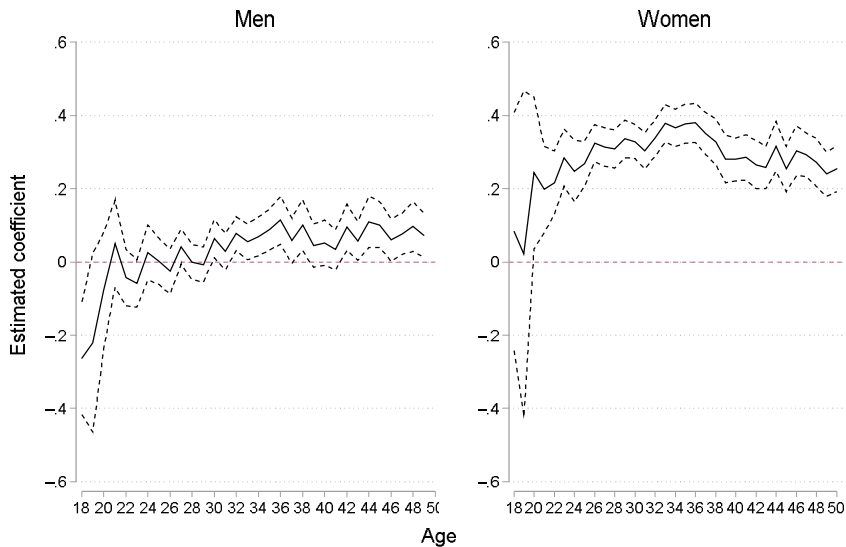
Figure 3 displays the estimates for marital status. First, being married (versus never married) seems to protect individuals from in-work poverty at every stage of the life course, especially for women. This effect is indeed remarkably stable: around a 20 and 10 percentage point reduction for women and men respectively. Interestingly, an early marriage (i.e., before age 22) is associated with a higher risk of belonging to the working poor only for men. Second, experiencing separation after marriage is much more detrimental for women compared to men. Separation is associated with a progressively higher in-work poverty risk for women until age 32–36. The in-work poverty risk slightly decreases later on, but remains substantially higher compared to men at any age. For men, the association between separation and belonging to the working poor is negative even very early in the life course; the estimates are only positive and statistically significant from approximately age 34 on, although the effect size is negligible.

**Figure 4: Age-specific associations between marital status and the probability of in-work poverty, birth cohort 1957–1964**

a) Married (ref.: never married)



b) Separated (ref.: married)

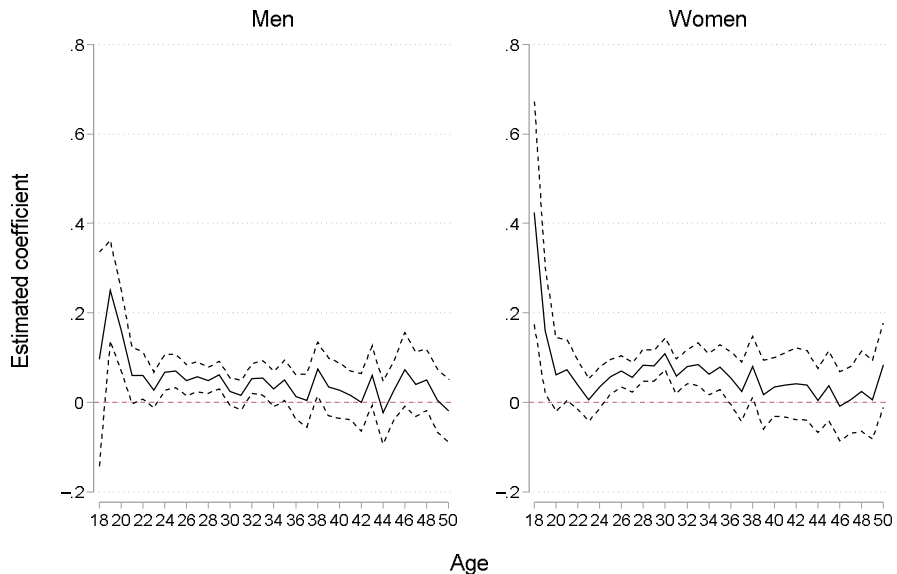


Source: NLSY79 data. Dashed lines: 95% confidence intervals.

Finally, we consider the age-specific associations between the number of children in the household and in-work poverty. As shown in Figure 5, the presence of one child triggers a larger probability of belonging to the working poor for both men and women, especially in their early life course. The estimates begin to lose statistical significance around age 30 for men and age 36 for women. In contrast, the probability of in-work poverty associated with the presence of two or more children is much more persistent across time. The in-work poverty risk is very high early in the life course. Although the effect size begins to diminish for both genders, they remain statistically significant until approximately age 36–42 respectively.

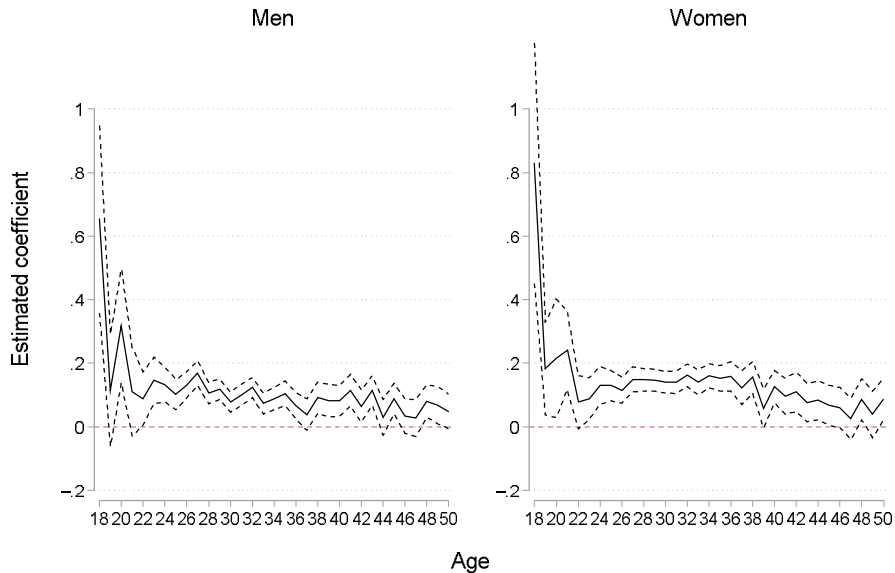
**Figure 5: Age-specific associations between the number of children and the probability of in-work poverty, birth cohort 1957–1964**

a) One child (ref.: no children)



**Figure 5: (Continued)**

Two or more children (ref.: no children)



Source: NLSY79 data. Dashed lines: 95% confidence intervals.

#### 4. Discussion

Both in the United States and Europe, the working poor have become an increasingly worrisome phenomenon since the 1980s. The excellent available scholarship on the macro- and micro-level determinants of in-work poverty overlooks if and how the effects of family demographic processes change over the life course. Therefore, our study complements previous research by adopting a longitudinal perspective to situate the risk of in-work poverty across individual life courses as a function of critical transitions related to leaving the parental home, union formation and dissolution, and parenthood.

For the United States, we find that these family demographic processes are associated with the probability of belonging to the working poor and these associations are generally stronger for women than men. Further, for our birth cohort, the age-specific effects of family demographic processes are considerably larger compared to the average effects of traditional stratification factors reported in the literature. As an

example, for education, comparative cross-sectional analyses show that not holding a high school diploma or having some college compared to holding a high school diploma changes the probability of in-work poverty by between 4–10 percentage points (Lohmann and Crettaz 2018; Brady, Fullerton, and Moren Cross 2010). We additionally show that these relationships are more substantial for very young adults (age 18–22); this is an example of how a relatively low prevalence of specific family events at young ages, such as the transition to parenthood, are associated with very high penalties (Brady, Finnigan, and Hübgen 2017).

Although the risk of belonging to the working poor is then relatively stable over individual life courses, we identified a wider prevalence of in-work poverty during defined phases characterized by care responsibility (typically when small children are present in the household). Therefore, the average associations between family demographic processes and in-work poverty across all age groups are likely to be underestimated. It will be crucial to compare these results to those for younger cohorts of individuals, whose family life courses are still unfolding. In the context of increasing inequality and exacerbated disadvantage for young adults, the effects of family processes might be even larger in specific life-course phases.

Two main aspects deserve further intense study by looking at in-work poverty risk over the life course: the heterogeneity by number of earners in the households and the relative disadvantage associated with self-employment. Both single-earner households and self-employed individuals are more likely to suffer from income volatility; if and how this engenders differentials in the risk of in-work poverty at different ages is an empirical question.

Finally, it should also be emphasized that our results indicate individuals in our cohort 1957–1964 were exposed to poverty just because they experienced a family demographic transition. Notably, they did not rely on welfare support as a principal source of household income, but succeeded in accessing the labor market. This result is of great interest for policies that monitor and aim at improving individuals' capacity to set up households and begin family formation independent of economic constraints. Because the associations between family demographic processes and in-work poverty are so substantial across much of the life course, future comparative research should focus on the role of institutions in moderating the exposure to these life-course risks.

## 5. Acknowledgments

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