The Impact of Economic and Employment Instability on Fertility: Sub-Population Heterogeneities in Sweden

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Introduction

Over the past two decades, Sweden has experienced a rapid increase in immigration, with foreign-born individuals now comprising over 20% (Statistics Sweden, 2024). This demographic shift coincides with transformations in the Swedish labour market towards greater flexibility, resulting in increased instability for workers (Gauffin, 2020; Gauffin, Heggebø and Elstad, 2021; Bodin *et al.*, 2022). These changes in labour regulations have particularly impacted migrant populations, who are often overrepresented in precarious and instable, non-standard employment arrangements (Woolfson, Fudge and Thörnqvist, 2014).

Generally, employment instability, precarious employment and unemployment have been found to negatively affect fertility outcomes (Özcan, Mayer and Luedicke, 2010; Lundström and Andersson, 2012; Schmitt, 2012; Bono, Weber and Winter-Ebmer, 2015; Vignoli, Tocchioni and Mattei, 2020; Matysiak, Sobotka and Vignoli, 2021; Scherer and Brini, 2023; Alderotti *et al.*, 2024), though the effect is somewhat weaker when income is included in the model (Alderotti *et al.*, 2021). Recent research also suggests that the income prerequisites for childbearing have increased in the West (van Wijk and Billari, 2024). The negative effect of employment and income instability is often seen as a postponement—people delay childbearing until they achieve greater stability. The Narrative framework suggests that the mechanism driving the postponement-effect is that uncertainty and instability hamper the individual's ability to plan for the future and create a stable narrative (Vignoli *et al.*, 2020; Matysiak and Vignoli, 2024).

Stable employment has been found to be an important precondition for childbearing in Sweden (Lundström and Andersson, 2012). Nevertheless, a notable research gap persists regarding how employment instability specifically affects the fertility of migrants. Early Swedish studies by Andersson and Scott (2005, 2007), found no discernible fertility differences between migrants and native-born individuals based on labour market status. These studies suggested that institutional and policy contexts, rather than cultural backgrounds, drive childbearing behaviour. However, the demographic and labour market landscapes have significantly changed since: fertility rates are declining, migration has increased, and new forms of uncertain employment have emerged. More recent international studies even suggest the negative effect of precariousness or employment instability could be weaker or reversed for migrants (Comolli, 2017; Wood and Neels, 2017).

Beyond this, previous research on migrant-native disparities in employment uncertainty's effect on fertility has largely neglected the profound heterogeneity within the migrant population, stemming from their reason for migration and type of residence permit. While analyses are often stratified by country of birth, distinguishing between labour migrants, refugee migrants, or family reunification migrants has received less attention. This is a crucial consideration, because the type of residence permit directly structures migrants' labour market integration processes and access to decent work (Castles, 2011; Likic-Brboric, Slavnic and Woolfson, 2013; Bevelander and Hollifield, 2022; Ortlieb and Knappert, 2023). For some migrants, employment or income is a direct condition for their stay (e.g in relation to the UK see Anderson, 2010; as is the case with some permits under current Swedish policy, Swedish Migration Agency, 2025). Therefore, the implications of an unstable employment trajectory or spells of unemployment may differ significantly for them compared to Swedish-born natives or migrants with permanent residency or citizenship. This differential meaning of employment instability is hypothesised to lead to varied fertility responses.

This study also includes both men and women, contributing to the growing body of literature on migrant men and women's fertility behaviour. While Sweden has one of the highest female labour market participation rates globally (OECD, 2024), the labour market remains heavily gendered. Childbearing itself is inherently a gendered process, both socially and biologically. Furthermore, migrant women and men often inhabit different occupational sectors compared to Swedish-born natives, producing a gendered migrant division of labour (Christou and Kofman, 2022). Consequently, the mechanisms through which employment instability affects fertility are likely to differ not only between genders but also across migrant and native-born men and women – a distinction this study will specifically focus on.

Given these recent transformations in the Swedish labour market towards greater flexibility and dualisation (Gauffin, 2020; Berglund *et al.*, 2021; Bodin *et al.*, 2022), meeting the new reality of a more diverse and economically insecure population requires a re-examination of whether migrants exhibit a similar fertility response to instability as the Swedish-born population. Thus, an updated examination of these dynamics, thoroughly considering migrant population heterogeneities and including both genders, is necessary.

This study aims to address the question: How does economic and employment instability affect the transition to parenthood among different migrant groups compared to Swedish-born individuals? Additionally, the study will analyse gender-specific patterns in these effects across groups and investigate how factors such as migrant origin, reason for migration/permit, age at arrival, and/or time spent in Sweden influence the association between economic and employment instability (measured as spells of no income or employment) and fertility. To do so, the study employs an event-history design, utilising Swedish total population register data.

Data and Methods

Data Source and Study Population

This study will utilise high-quality, longitudinal data from several Swedish administrative registers, provided by Statistics Sweden. These registers provide comprehensive, whole-population information on demographic events, migration history, education, and detailed yearly data on income and employment.

The study population will include all childless men and women residing in Sweden from 2000-2022. Individuals will be followed from age 15 to 50 to capture the full childbearing window. The full study population comprises of 5 518 424 individuals (46% women; 25% foreign-born). Individuals enter the risk set for the analysis at age 18 (or date of immigration, if later), an age that better reflects the start of their labour market career following compulsory education. They will be censored at their first live birth, emigration, death, or at the end of the observation period in 2022.

Analytical Method

The study employs an event-history analysis design using piecewise-constant exponential models to estimate the hazard of a first birth. Models will be run separately for men and women. To test the central hypotheses regarding migrant-native differentials, interaction terms between the instability measures and variables capturing migrant background (e.g., reason for migration, region of origin) will be introduced. This allows for a direct statistical test of how the effects of instability vary across groups.

Variables and Measurement

The dependent variable for the analysis is the transition to a first live birth. Regarding the main independent variables, the measurement strategy is designed to move beyond the static, single-year measures of labour market status common in previous research. Instability is conceptualised not as a fixed state (such as long-term unemployment) but as a dynamic trajectory characterised by repeated

shifts between employment and non-employment. Therefore, the models will test the effects of both an individual's *current status* and, with greater emphasis, their *cumulative experiences* of instability during their labour market career. This multi-faceted approach is operationalised through several measures:

1. **Current Status:** A time-varying variable will capture an individual's primary economic and employment status the year before birth, distinguishing between stable employment, unemployment (defined as >90 days registered as unemployed during year *i*), studying, and being on parental or sick leave, for example. A separate time-varying variable will capture the lagged disposable income of an individual.
2. **Employment Instability Trajectory:**
    a. To measure the cumulative impact of instability, trajectory variables will be constructed. These will include measures of the proportion of time spent unemployed since entering the risk set, and a categorical variable capturing an individual's dynamic experience of unemployment (e.g., never, only in the past, only currently, or persistently), inspired by the work of van Wijk et al. (2022).
    b. Additionally, an alternative operationalisation capturing the number of shifts between employment and unemployment during one's labour market career will be explored. To be able to compare the effects of number of shifts between individuals with different exposure times, the measure will be interacted with the baseline.
3. **Income Instability:** In subsequent models, the dimension of income will be incorporated. This will be measured through variables identifying spells of low income and potentially significant year-to-year income volatility. This allows us to distinguish between instability of employment and instability of income.
4. **Combined Employment and Income Trajectory:** Following the example of van Wijk et al (2022), a combined measure will be constructed by summing indicators for experiencing past and current spells of low income and past and current spells of unemployment, resulting in a variable ranging from 0 to 4.

The primary moderating variables will capture both, the difference between migrants and the Swedish-born individuals, and the heterogeneity of the foreign-born population, distinguishing migrants by their reason for migration (e.g., labour, family reunification, refugee), region of origin, and time since migration. These will be used in the interaction terms described above.

Finally, the models will control for a range of crucial time-varying covariates, including level of education and partnership status. In alternative specifications only focusing on employment instability, the models will also control directly for the level of individual disposable income to disentangle the effects of instability from those of absolute economic resources.

Expected Findings

The study's hypotheses are guided by the Narrative Framework (Vignoli *et al.*, 2020), which suggests that employment and income instability generally hinder future planning and lead to fertility postponement. While *this pattern is expected to hold for the Swedish-born population (H1)*, it is hypothesized that for migrants, the response to instability is far more complex and can diverge in several directions, fundamentally shaped by their reason for migration and permit type, as well as country of origin and duration of stay/age at arrival. For migrant populations, three competing hypotheses regarding their fertility responses to instability are tested.

*H2: Cumulative disadvantage reinforcing the postponement of transition to parenthood***.** For some migrants, particularly labour migrants whose residency permits are conditional on their employment, employment instability may create a state of extreme precarity. The threat of job loss is not just economic but existential, potentially leading to deportation. For this group, it is hypothesised that the negative effect of instability on fertility will be even *stronger* than for the native-born population.

H3: De-coupling of stable employment and transition to parenthood. For other groups, such as refugee migrants who have experienced profound life-course disruption, or those whose integration pathways offer limited access to stable careers, the normative link between a secure job and family formation may be severed. If future stability is not a realistic expectation, there may be little incentive to postpone childbearing. For these groups, a significantly weaker negative effect of instability on fertility is expected.

H4: Transition to parenthood as a means for uncertainty reduction: opting for the 'alternative career' as a parent. When migrants face structural barriers that limit their ability to find meaning and stability in the labour market, they may instead invest in the sphere of the family. Thus, it is hypothesised that for some groups, particularly women facing limited labour market opportunities and originating from countries with more traditional gendered division of labour, instability may accelerate the transition to parenthood as it becomes an 'alternative career' and a primary source of identity and stability.

Furthermore, how these patterns are gendered will also be examined. The 'alternative career' hypothesis, for instance, has traditionally been applied to women, and the study will investigate whether and how men's fertility decisions are shaped by these same dynamics. By systematically testing these varying responses, this study will provide a nuanced account of how diverse populations build families under conditions of growing labour market instability.

Preliminary Findings and Next Steps.

The dataset for this study has been constructed from Swedish administrative registers and structured for event-history analysis. Additionally, some preliminary descriptive analyses have been conducted, revealing important contextual realities for this study. First, looking at both the exposure to unemployment spells, and transition to and from unemployment between year *i* and *i+1* during the total study period, important differences between origin groups emerge. For example, Swedish-born men spend a lower share of time in unemployment compared to men born in Middle East and Africa, and their unemployment is substantially less sticky, meaning larger shares of unemployed Swedish-born men find a job quickly after unemployment compared to Middle Eastern and African-born men.

Second, looking at fertility, the survival curves for different origin groups by gender reveal profound differences in transition to first-birth in the synthetic cohort in question. Looking at women, Middle Eastern and African-born women show faster transition to first birth compared to all other origin groups, and Middle Eastern-born women are least likely to remain childless (around 10%), while among African-born women and Swedish-born women the share of childless is around 20% at the age of 50. Women from North America and Oceania have slowest transition and highest share of childlessness at the age of 50 (around 40%), which is likely partly due to their higher rates of emigration.

While differential exposure to employment instability does not imply that the effect would be different across groups, the descriptive analysis confirms the co-existence of unequal exposure to unemployment spells and divergent family formation patterns. Thus, as a next step, it is imperative to formally model the *effect* of instability on fertility and, most importantly, to test whether this effect is uniform across all groups or if it is fundamentally different for migrants. Answering this question is the central goal of the main analysis.

The analysis will be completed during the spring of 2026, ensuring that a full paper with complete results will be ready for presentation at the EPC2026 conference. The study aims to make an important contribution to understanding how the new realities of flexible labour markets together with tightening migration policy shape the family formation patterns of Europe's diverse populations, providing crucial insights for future family, employment, and migration policies.

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