

# Timing matters: Family formation, migration, and the labor market outcomes of immigrant women

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## Short abstract

Immigrant women typically represent a similar share of the population as immigrant men, and yet their labor market outcomes are studied far less often. This gap also reflects the fact that research on the labor market outcomes of women rarely considers immigrants. Here we address this gap by unifying disparate strands of research to develop a conceptual framework that draws on theories of migration, immigrant fertility, motherhood earnings inequalities, and diverging destinies. We use this framework to theorize interactions between the timing of family formation, the timing of migration, and the development of labor market inequalities among immigrant women. We test the explanatory power of this framework using an empirical case study of Sweden, which enables us to demonstrate the complex interplay of life events and their role in determining labor market outcomes. We use longitudinal data on the entire foreign-born population born between 1975 and 1980 who arrived in Sweden as adults aged 16-39. Female immigrants who arrive at earlier ages have higher earnings at age 40, but family formation before migration is equally important for explaining their earnings. We not only show that the timing of fertility and migration are crucial for the labor market outcomes of immigrant women, but also how they interact with migration history and circumstances on arrival to determine these outcomes. Finally, we discuss the strengths and weaknesses of our conceptual framework, and make a series of recommendations for future research on the socio-demographic lives of immigrant women.

## Introduction

It is well known that becoming a parent has an impact on labor market outcomes and that the impact is typically negative for women. For example, a recent review of the literature in high-income contexts found robust evidence that motherhood results in lower earnings (Leonard and Stanley 2020). Although studies have repeatedly highlighted this potential ‘penalty’ of motherhood (Almond et al. 2023; Sigle-Rushton and Waldfogel 2007; Jee et al. 2018), much less attention has been paid to identifying the groups who are most at risk of experiencing a loss in socio-economic status after parenthood (c.f. Van Winkle and Fasang 2020). In particular, research on the labor market outcomes of women rarely considers immigrants (OECD 2023). This is an important gap, not only because knowledge about this topic is important for policymakers given large numbers of immigrant women in many countries, but also because theories predict that migration plays a specific role in shaping the lives of immigrant women.

Many studies have examined the childbearing of immigrants in high income countries, but these studies have almost exclusively focused on childbearing as an outcome (Kulu et al. 2019), rather than its role in determining socio-economic progress later in life. As a result, there are both theoretical and empirical gaps in our knowledge of childbearing as a determinant of immigrant’s labor market outcomes. Numerous studies have shown that fertility rates are elevated for immigrants who have recently arrived in a new destination (Kulu et al. 2019), and there is evidence that motherhood and migration impact each other such that childless women are more likely to migrate and motherhood is more likely to be delayed until after migration (Milewski 2010). However, there is scant evidence that describes how the interplay between the timing of migration and the timing of childbearing shapes life after arrival. Furthermore, migration scholars often describe fertility as a marker of integration, in part because fertility is predicted to determine immigrant’s socioeconomic outcomes, but this relationship remains largely untested, including the extent to which it varies by migration history. At the same time, sociological theories predict that the transition to parenthood can have a negative impact on female labor market outcomes but they rarely discuss the intersection between gender and migration, despite the fact that immigrants often delay childbearing until after migration (Andersson 2004; Milewski 2010). Moreover, the limited research that has been carried out pays little attention to sources of

heterogeneity (OECD 2023). Compared with immigrants from high income countries, arrivals from low and middle income countries exhibit slower and less successful integration on a range of important socioeconomic outcomes (Edin et al. 2000). Although research suggests that this is also true for refugees and asylum seekers, less is known about their long-run trajectories (Bevelander 2011), and in general the interaction between childbearing and migration background is underexplored as a potential determinant of immigrant’s life course trajectories in destination countries. In addition to migration background—such as country of birth and refugee status—socioeconomic background may also play a key role in determining the labor market outcomes of immigrant women, especially because many immigrants experience patterns of socioeconomic disadvantage that cause their life course trajectories to diverge from the majority population (Harber-Aschan et al. 2022). In the full paper, we will develop a conceptual framework that links these different theories and explanations and then test this framework by showing how the timing of family formation and the timing of migration interact in order to determine labor market outcomes.

## Data and method

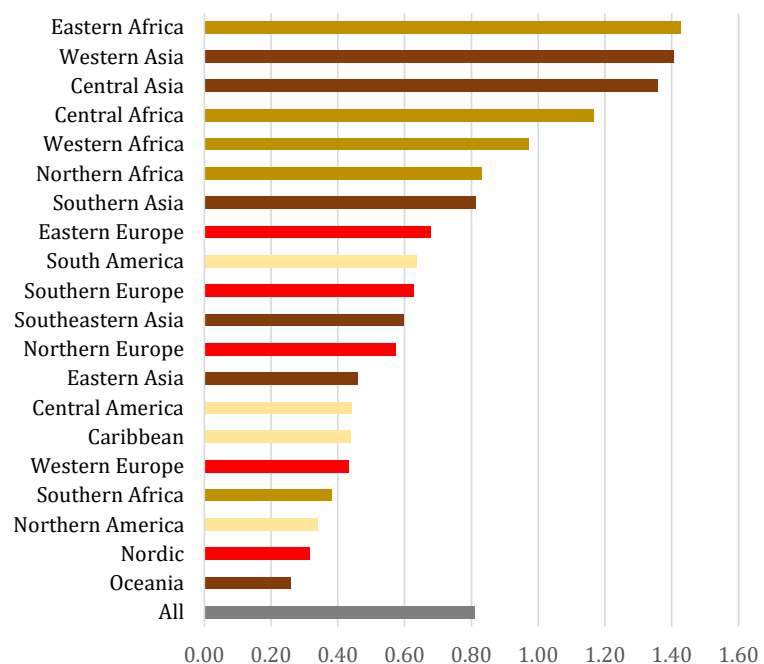
We use register-based longitudinal data that are collected and administered by Statistics Sweden. Our data cover the period 1990-2022, and include a range of variables for individuals and their children. We focus on cohorts who were born between 1975 and 1980, and we limit our study population to immigrants who arrived in Sweden from age 16 to 39. We define refugees based on each immigrant’s first residence permit and whether it indicates an admission status of refugee (or other humanitarian status). Given that we focus on labor market outcomes up to age 40, the majority of our analysis excludes anyone who dies or emigrates between their first arrival in Sweden and the year that they are aged 40. We also exclude a very small proportion (less than 1%) of cases who are missing data on the variables in our analysis. Our study population is approximately 81,000 female immigrants, approximately 15% of whom arrived as refugees. Our analysis will focus on several labor market outcomes, including employment status, work-related benefits and earnings, although for this abstract we focus on the latter. By restricting our attention to immigrants who arrive in Sweden before age 40, we are able to measure earnings at age 40 for all members of our study population (with separate subgroup analysis in the final paper for outcomes at earlier ages). With respect to the determinants of earnings, our main variables of interest are children ever born (CEB) on arrival, and age at arrival. Not shown here, we also examine the timing of parenthood (i.e. age at first birth). Our analysis uses descriptive statistics (e.g. Figure 1) and generalized linear modelling (e.g. to produce the fitted values shown in Figures 2 and 3). These models control for birth cohort and country of birth. Figure 3 includes a full interaction between CEB on arrival and age at arrival.

## Results

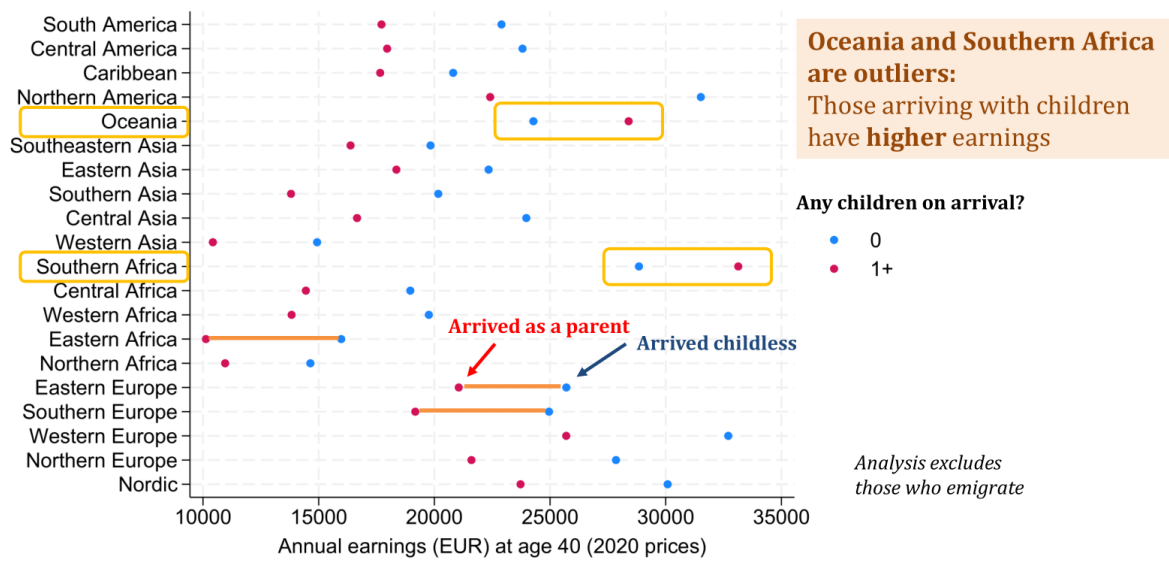
Figure 1 shows that there is considerable variation in the number of children immigrant women have ever born when they arrive in Sweden. For example, women from Eastern Africa (e.g. Somalia, Ethiopia and Eritrea) arrive having had more than 1.4 children, as compared with Nordic-born women who arrive with fewer than 0.4 on average.

We note that women who arrive with fewer children are more likely to emigrate before age 40 (i.e. emigration is selective on childbearing).

**Figure 1: Average children ever born on arrival by country of birth**

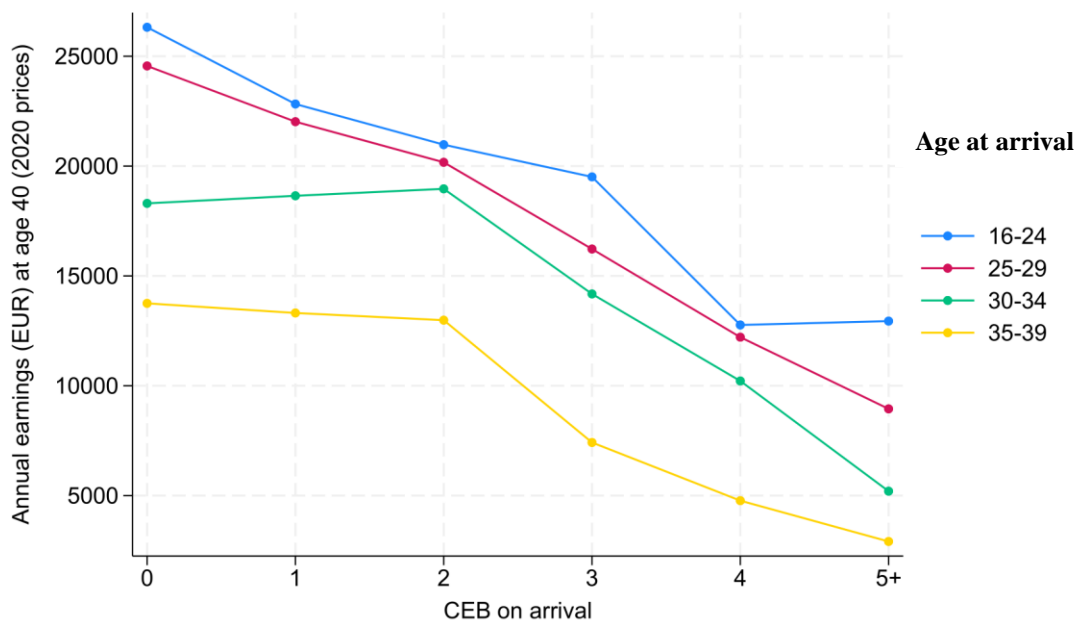


**Figure 2: Annual earnings at age 40 for women who migrated as mothers versus those who were childless**



Arriving with children makes a material difference to women’s labor market outcomes in mid-adulthood. For example, women who are childless when they arrive earn around 5,000 Euros more on average (in 2020 prices) than those who arrive with children (Figure 2). In addition, this finding appears to be remarkably consistent across origins, varying only to a limited extent by country of birth. Only two outliers are apparent: Oceania and Southern Africa, but together these account for less than 1% of the study population.

**Figure 3: Annual earnings at age 40 (y-axis) by CEB on arrival (x-axis) and age at arrival (4 separate lines)**



Motherhood on arrival is a key determinant of earnings later in life, but the impact of motherhood on earnings for female immigrants is determined by a complex interaction between CEB on arrival and age at arrival. The lowest levels of earnings at age 40 are for those arriving with large families—notably three or more children, and this is irrespective of age at arrival. However, those arriving at younger ages have the highest earnings (presumably linked partly to duration of residence), and there are different patterns of inequality for those arriving before age 30 and those arriving after age 30.

## Conclusion

To conclude we show that CEB on arrival varies by country of birth. It also varies by refugee status (results not shown here but will be presented at EPC). We show that country of birth matters for earnings in mid-adulthood but differences between women who arrive as parents and those who arrive childless are often similar across countries. In addition, we show that it is not just motherhood that matters but also number of children on arrival, which interacts with arrival age and duration of residence to shape earnings (at age 40). In the full paper we will show further analysis to test our conceptual framework and demonstrate its strengths and weaknesses, making a series of recommendations for future research.

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