The varying impact of early parenthood on the socio-economic outcomes of childhood refugees

Ben Wilson [1, 2], Alice Goisis [2, 3] and Siddartha Aradhya [1]

1: Stockholm University, 2: London School of Economics, 3: Max Plank Institute for Demographic Research

Introduction

Over the last decade Europe has experienced one of the largest inflows of refugees and asylum seekers since the aftermath of the Second World War.[1] In 2015 alone, Europe registered approximately 1.3 million new asylum claims, with almost the same number, 1.2 million, registered in 2016.[2] The magnitude of these inflows has put pressure on European policy-makers to focus on short-run concerns: managing national borders, meeting the immediate needs of new arrivals, and processing claims for residence and asylum.[3] Much less attention has been paid to the issue of refugee integration, despite its importance for social cohesion, societal welfare, and national socio-economic prospects over the short- and long-term.[4]

Compared to immigrants from high income countries, arrivals from low and middle income countries exhibit slower and less successful integration on a range of important economic, educational, and social outcomes.[5] Although some existing research suggests that this pattern also holds for refugees and asylum seekers, much less is known about their long-run prospects for integration, or the factors that are likely to influence their life opportunities in destination countries.[6] The same applies to the literature on immigrants who arrive as children, such that very little is known about the long-run integration of childhood migrants who are refugees. This is somewhat surprising given that they are one of the most vulnerable groups, and that they face some of the steepest integration barriers.

This study focusses on the integration of refugees who arrive as children. As such, it seeks to understand the significant challenges of integrating the large number of child refugees, and children of refugees, who have arrived in Europe over the last few years. In order to do this, we examine the integration trajectories of childhood refugees who arrived in earlier cohorts, and who have now completed early-adulthood. As such, we are able to examine the integration trajectories of these refugees, and to focus on the determinants of successful integration.

One of the most understudied determinants of refugee integration is family formation. For example, and to the best of our knowledge, there has been no previous research on the impact of the timing of childbearing on the human capital and labour market trajectories of child refugees. This is particularly surprising given that there is a considerable literature showing that early childbearing interrupts the educational and earnings careers of immigrants, in particular immigrant women.

We respond to the above gaps in the literature by carrying out a case study of the role of early childbearing in the process of CHILD refugee integration in Sweden. Our main research questions are: *(1) What are the effects of early childbearing on integration outcomes of childhood refugees?* and *(2) How do these effects vary over the life course?* In answering these questions, we also seek to identify whether there are critical ages for becoming a parent in early adulthood, i.e. *(3) does age at first birth determine the integration trajectories of refugees who arrive as children?*

Data

We use register-based data that are collected and administered by Statistics Sweden.[9] Our data cover the period 1990-2012, and include a range of background variables for individuals, their parents, and their siblings. In order to estimate integration outcomes at all ages from 19-30, we study cohorts who were born between 1971 and 1982, and we limit our sample to child migrants, who we define as those immigrants who arrived in Sweden under the age of 19. Given our interest in child refugees, we include only those child migrants whose first residence permit – or whose parent's or sibling's first residence permit – indicates an admission status of refugee (or other humanitarian status). At the same time, we exclude all child migrants whose country of birth is from another European country, as well as those born in the US, Australia, Canada, or New Zealand. We also exclude anyone who dies or emigrates before age 30, and a small number of cases who are missing data on the variables in our analysis. This provides us with a sample of approximately 26,000 refugee immigrants who arrived in Sweden as children, almost 15,000 of whom are included in our sibling model sample (described below).

Table 1: Child migrant refugees by country of birth (sibling sample)

Country of birth:	Frequency (n)	% of total	Country of birth:	Frequency (n)	% of total
Bosnia	1,147	8	Horn of Africa	727	5
Former Yugoslavia	1,570	11	Africa: Other	158	2
E. Europe	734	5	Central America	212	2
Middle East	2,244	16	Chile	1,550	11
Iran	2,592	18	South America	260	2
Iraq	1,068	8	S.E. Asia and Pacific	442	3
Turkey	1,070	8	Asia: Other	272	2
			Total	**14,046**	**100**

Method

Our analysis focuses on four outcomes – educational enrolment, educational achievement, employment, and earnings (annual income from employment) – which together provide a comprehensive assessment of the human capital and labour market integration of child refugees. By restricting our attention to a group of refugees who arrive in Sweden during childhood, and remain resident in Sweden until age 30, we are able to study the trajectory of these outcomes over the young adult life course. With respect to the determinants of these outcomes, our main variables of interest relate to early childbearing. These are: (a) becoming a parent during early adulthood (usually measured here as becoming a parent before age 30), and (b) the timing of parenthood (i.e. age at first birth). Our initial analysis (only some of which is shown here – e.g. Fig.1) uses descriptive statistics and generalised linear modelling to show that there is a significant association between both of these determinants and all four of our outcome variables.

In order to provide a more robust estimate of the causal impact of early parenthood, we then estimate sibling models,[10] which is an established approach for estimating the impact of different determinants on the outcomes of childhood arrivals.[7,8] The advantage of sibling models is that by focusing the comparison on within-family differences (i.e. between two or more siblings with the same mother), we are able to control for many potential confounders (that are the same within families) such as socio-economic family background and genetic characteristics.

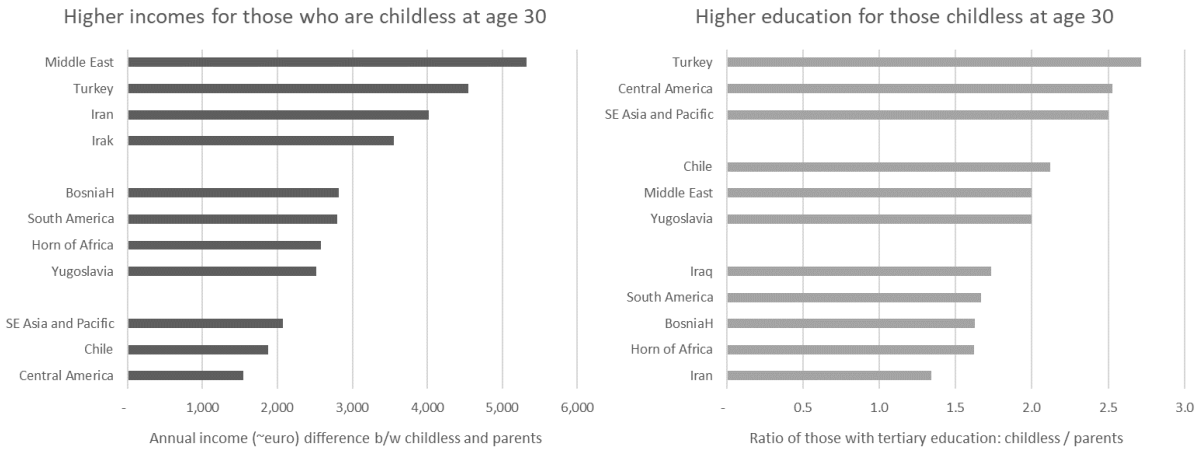
The statistical model can be summarised as follows:

$$E\left(Y_{ij}\middle|\ \text{family } i, X_{ij}\right) = \alpha_i + BX_{ij} \qquad (1)$$

where $E\left(Y_{ij}\middle|\ \text{family } i, X_{ij}\right)$ is the conditional mean of Y_{ij} given family (mother) fixed effect i and covariates X_{ij}. Note that Y_{ij} is modelled at different ages, from 19-30, although with the exception of the early childbearing variables, the covariates remain the same at each age. In order to estimate this model, we restrict our analysis to individuals who have one or more siblings, and whose mother can be identified in the population register. As such, we exclude from our sample individuals who have no siblings or individuals whose mother's identifier is missing, the majority of whom are adopted. Despite these restrictions, our final sample includes almost 15,000 siblings, and Table 1 (above) shows the distribution of child migrant refugees in our sibling sample based on the most detailed aggregation of maternal country of birth that is available in our data.

In addition to the advantage of sibling models, a focus on refugees also provides several methodological advantages for the study of integration, not least the fact that the timing of refugee migration is less endogenous than other forms of migration with respect to the process of integration, especially for those arriving during childhood. Prior research on the integration of child migrants has shown that early age at arrival has a significant impact on education and earnings,[7,8] so we control for age at arrival in all our sibling models. We also control for sex, birth cohort, birth order, and pre-exposure outcomes at age 18.

Figure 1: Differences in income and education, childless at age 30 versus parents at age 30



Preliminary results

Here we limit our attention to the results for educational attainment and income. As shown in Fig.1, all child refugees who are childless at 30 have a significant advantage over those who are parents at age 30, although there is considerable variation by maternal country of birth. These results are broadly similar in the sibling models, which demonstrate a consistent advantage by age 30 for refugees who are not parents. As shown in Table 2, these results vary in size according to the age at which childhood refugees become parents (i.e. age at first birth). For example, those who become parents when they are teenagers have a significantly lower chance of gaining tertiary education by age 30, and much lower income at age 30, as compared with those who have no children at age 30. Not only are these estimates statistically significant, but they are also substantial (in this example: a 19 percentage point lower chance of obtaining tertiary education, and more than 2,000 euros lower income per year). In addition to analysing outcomes at age 30, we also examine how effects vary for

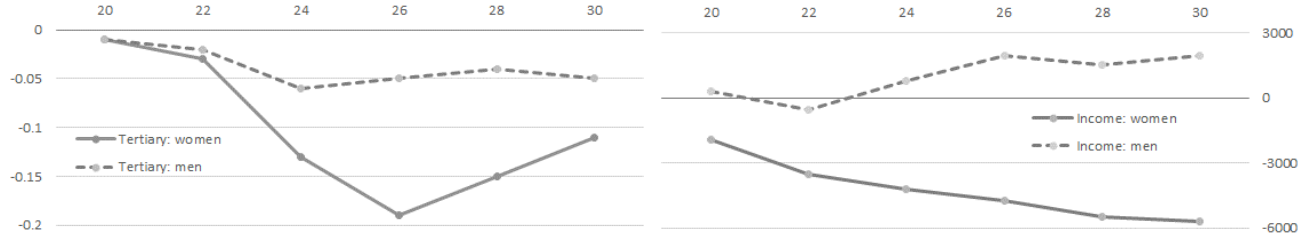
childhood refugees over their entire early life course, from ages 19-30 (Table 2). In general, sizeable effects are established early in the life course, although this appears to be slightly less clear for education, where effects become stronger with age up to age 28. Similarly, parenthood after age 26 does not appear to have a significant impact on educational attainment (up to age 30). In Figure 2, we show how the results differ for men and women by focussing on families with two or more siblings of the same sex (n~4,000). The effects of parenthood are much worse for women than they are for men, especially for income, where the differences between male and female parents become consistently larger over the life course. Notably, the effects on male income even become positive.

Table 2: Fixed effects models of the effects of age at parenthood on outcomes at each age

	Tertiary education (0 or 1)					**Income** (10* SEK, approx. = euros)				
	Age					**Age**				
	22	24	26	28	30	22	24	26	28	30
Age at first birth										
childless (reference)	-	-	-	-	-	-	-	-	-	-
under 20	-0.06 ***	-0.15 ***	-0.18 ***	-0.19 ***	-0.19 ***	-2258 ***	-2543 ***	-2666 ***	-2758 ***	-2416 ***
20-22	-0.05 ***	-0.12 ***	-0.17 ***	-0.19 ***	-0.18 ***	-2761 ***	-2233 ***	-1814 ***	-2440 ***	-2060 ***
23-24		-0.10 ***	-0.14 ***	-0.15 ***	-0.16 ***		-2324 ***	-1297 ***	-2124 ***	-1463 **
25-26			-0.08 ***	-0.10 ***	-0.10 ***			-1899 ***	-1250 **	-1238 *
27-28				-0.02	-0.04 *				-2156 ***	- 783
29-30					-0.03					-2199 ***

note: All models control for age at arrival, sex, birth cohort, birth order, outcomes at age 18, and family fixed effects
legend: * p<0.05; ** p<0.01; *** p<0.001

Figure 2: Variation by sex in the effects of parenthood on education and income



Note: All model control for age at arrival, sex, birth cohort, birth order, outcomes at age 18, and family fixed effects. Effects are relative to the childless.

Conclusion and next steps

Our results show that childhood refugees who become parents early in life will experience constraints upon their acquisition of education and income. Targeted social policies may therefore be required to address this issue. In the full paper, we will include a more comprehensive analysis of how early parenthood has an impact on integration trajectories over the life course, as well as conducting various checks of the robustness of our results.

References

1. UNHCR. UNHCR - Statement by UN High Commissioner for Refugees, António Guterres on refugee crisis in Europe. http://www.unhcr.org/55e9459f6.html. Published 2015. Accessed September 20, 2017.
2. Eurostat. Asylum quarterly report - Statistics Explained. http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_quarterly_report. Published 2017. Accessed September 20, 2017.
3. Pew Research Center. *Still in Limbo: About a Million Asylum Seekers Await Word on Whether They Can Call Europe Home*. Pew Research Center; 2017. Accessed September 20, 2017.
4. Papademetriou DG, Benton M, Banulescu-Bogdan N. *Rebuilding after Crisis: Embedding Refugee Integration in Migration Management Systems*. Washington DC: Migration Policy Institute; 2017.
5. Edin P-A, LaLonde RJ, Aslund O. Emigration of immigrants and measures of immigrant assimilation: Evidence from Sweden. *Swed Econ Policy Rev*. 2000;7(2):163–204.
6. Bevelander P. The Employment Integration of Resettled Refugees, Asylum Claimants, and Family Reunion Migrants in Sweden. *Refug Surv Q*. 2011;30(1):22-43. doi:10.1093/rsq/hdq041.
7. Böhlmark A. Age at immigration and school performance: A siblings analysis using swedish register data. *Labour Econ*. 2008;15(6):1366-1387. doi:10.1016/j.labeco.2007.12.004.
8. Hermansen AS. Age at Arrival and Life Chances Among Childhood Immigrants. *Demography*. 2017;54(1):201-229. doi:10.1007/s13524-016-0535-1.
9. SCB. Population register data (Individregister). https://www.scb.se/sv_/Vara-tjanster/Bestalla-mikrodata/Vilka-mikrodata-finns/Individregister/. Published 2017. Accessed September 21, 2017.
10. Donovan SJ, Susser E. Commentary: Advent of sibling designs. *Int J Epidemiol*. 2011;40(2):345-349. doi:10.1093/ije/dyr057.