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The legacy of exile for children of refugees: Inequality and disparity across multiple domains of life

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Abstract

While much is known about the lives of refugees, less is known about the lives of their children, particularly with respect to the inequalities that they may face in adulthood. Using longitudinal data for the whole population of Sweden, we study outcomes at age 30 across different domains of life, including: education, earnings, family formation and the receipt of social support for unemployment, housing, or poor health. We make comparisons between Swedish-born children of refugees, Swedish-born children of non-refugee immigrants, Swedish-born children of Swedish-born parents, and foreign-born refugees who arrived as children. We then examine variation by parental country of birth for Swedish-born children of refugees. Our results show that inequalities and disparities are extremely heterogeneous, by outcome, by sex, and by parental background. Despite lower fertility at age 30, Swedish-born children of refugees experience inequalities in earnings, unemployment and housing support. This is true for both women and men, but varies considerably by parental country of birth. Children of refugees from Lebanon or Chile are the most likely to experience disadvantage, in contrast to those with parents from Iran or Poland. Those with two refugee parents fare better than those with one refugee parent and one Swedish-born parent, suggesting that a native-born parent is not necessarily protective against inequality. We find clear evidence of segmented adaptation for the children of refugees, but our findings suggest that adaptation is far from a uniform process, with a much richer picture emerging from a comparison across multiple domains of life.

Keywords: *Refugees, second-generation, adaptation, children of immigrants, Sweden*

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In recent years, there has been a marked increase in the number of immigrants claiming asylum across Europe (Eurostat 2016). As such, the long-run integration and adaptation of refugees is viewed by many governments and organizations as a fundamental societal challenge (Drouhot and Nee 2019; European Commission 2016; Eurostat 2016). This challenge is enhanced by the fact that refugees represent a subgroup of immigrants who face additional barriers when adapting to life in their new destination, including trauma relating to their forced migration (FitzGerald and Arar 2018). Naturally, it is difficult to predict the lives of recently-arriving refugees over the long-run. However, we can inform their long-term prospects by examining the lives of refugees who arrived in earlier waves of migration, as well as by studying the children of previously arriving refugees (FitzGerald and Arar 2018). Indeed, it is increasingly recognized that a comprehensive understanding of integration and adaptation over the long-run can only be achieved by studying the adult lives of immigrants' descendants (Zhou and Gonzales 2019), or in the case of forced migration, the children of refugees.

There has been much less research on the children of refugees than on their parents, especially with respect to the social inequalities that they experience in adulthood. This gap is not only important in order to identify and address inequalities, but also because studies of the children of refugees can help us to understand the process of intergenerational adaptation. This process can be defined broadly as the convergence of behavior across 'immigrant generations' – i.e. immigrants (G1), their children (G2), and grandchildren (G3) – as compared with a reference group of the native-born population (Drouhot and Nee 2019; Zhou and Gonzales 2019). Prior research suggests that adaptation for the second-generation (G2 native-born children of immigrants) is extremely heterogeneous, and that the speed and level of adaptation varies across countries, by parental origin, and according to the life-domain that is considered (e.g. labor market outcomes versus health outcomes) (Drouhot and Nee 2019; Zhou and Gonzales 2019). Moreover, it is now well-established that certain groups do not adapt, or adapt only partially, such that they are more likely to experience inequality and disadvantage as compared with the native-born population. Increasingly, these inequalities are seen as evidence that adaptation is *segmented*, defined as a process whereby social stratifications (primarily by ethnicity and class) interact to determine divergent life course pathways, implying adaptation toward different 'segments' of society (Zhou and Gonzales 2019).

Although recent research provides a more complex understanding of adaptation for the children of immigrants, what remains less understood is the extent to which adaptation is different for the children of refugees. Here, we respond to this gap and contribute to the sparse

evidence base by examining the adult outcomes of children of refugees across multiple life domains. We focus on Sweden, which represents an ideal case study for this research, in part because of the availability of high quality, longitudinal demographic data from its population registers, in combination with its long history of receiving considerable inflows of refugees.

ADAPTATION FOR THE CHILDREN OF REFUGEES

Given what we know about adaptation of the children of immigrants more broadly, it is plausible that segmented adaptation will be observed also for children of refugees, even despite the relatively high levels of social support received in Sweden by refugees (and by all members of the population in general), as compared with many other destinations (OECD 2016). In contrast to other immigrants, refugees are much more likely to experience trauma and psychological stress, not least because they are often victims of persecution, at risk of persecution, or at risk of inhumane treatment in their home country (Hollifield et al. 2002). Moreover, there is not only evidence that this trauma can be 'inherited' by the children of refugees, but also that in some cases they may experience an increased risk of adverse psychological outcomes (Sangalang and Vang 2017). Studies of the children of refugees have shown that their childhood is impacted by their parents' refugee background. For example, the distress endured by their parents has repercussions for refugee children in terms of emotional difficulties and school-related issues (McBrien 2005).

Despite this prior research, there is an ongoing need for more research on the descendants of refugees (Castles 2003; Fiddian-Qasmiyeh et al. 2014). Longer-run impacts of forced migration have received limited attention, in part because the majority of data (and data collection) has focused on the lives of refugees immediately after their forced migration (Fiddian-Qasmiyeh et al. 2014). Reviews of the literature on refugees and forced migration have noted this gap (Castles 2003), leading some to a call for more research that explores the *"multifaceted legacies of exile and displacement across generations"* (Fiddian-Qasmiyeh et al. 2014, p. 15).

Similar to research on the second generation in general, it seems reasonable to expect that there will be heterogeneity in the adaptation of children of refugees. Motivated by this expectation, we not only extend the extant literature by analyzing the adult outcomes of children of refugees, but also by exploring heterogeneity in a much more comprehensive manner than prior research. In particular, we examine variation across different domains of life – education, earnings, family formation and the receipt of social support for unemployment, housing, or poor

health – as well as variation across different parental countries of origin. We also make comparisons with different reference groups – the children of native-born parents, the children of non-refugee immigrants, and the foreign-born children of refugees – which helps to understand segmentation and to place inequalities and differentials in the broader social context.

THE CHILDREN OF REFUGEES IN SWEDEN

Sweden represents an ideal context for this study. This is due partly to the availability of high-quality longitudinal data for the whole population. However, it is due equally to its long history of receiving considerable numbers of refugees. Since the early 1970s, refugees and their family members have dominated migration flows to Sweden (Bevelander 2011). In addition to receiving immigrants who flee from persecution on personal grounds, for example due to their political views, much of this refugee migration has been driven by wars and conflicts around the world, for example the Iran-Iraq war at the end of the 1980s (Statistics Sweden 2016a). As such, many of the first non-European immigrants to Sweden were refugees. We note that Sweden also received large numbers of refugees in the middle of the Twentieth Century, due to events associated with the Second World War (Statistics Sweden 2016a). Most of these refugees were from Europe and most of them left Sweden soon after the war (Bevelander 2011), after which time immigration to Sweden was dominated for several decades by labor migration (Bevelander 1999, 2011). Small numbers of refugees and asylum seekers continued to arrive, but this changed in the 1970's when refugees – primarily from Chile, Poland, and Turkey – replaced labor migrants as the largest contributor to Swedish immigration (Bevelander 2011; Statistics Sweden 2016a). Labor migrants continued to arrive, including from refugee-sending countries – like Chile, Poland, and Turkey – but the dominance of refugee inflows continued into the 1980s, while the origins of these refugees became more diverse, including countries in the Middle East – such as Iran, Iraq and Lebanon – as well as countries in Asia and Africa (Statistics Sweden 2016a). Although less relevant for this study, this remained largely the case from the 1990's until today, such that Sweden has continued to receive material numbers of refugees from a range of origin countries, including Former Yugoslavia, Somalia, Syria and Afghanistan (Statistics Sweden 2016a, 2016b, 2020).

As a result of its historical receipt of refugees, and the demographic ageing of its population, Sweden has recently reached maturity as a home to significant numbers of adults whose parents were refugees that arrived in previous decades. Not only this, but the children of refugees in Sweden have parents who were forced to migrate from a diverse range of origin

countries (see Table 2). This includes the parental origins that we focus on here – Iran, Chile, Lebanon, Turkey, Iraq, Poland – which are the six largest parental origin groups for the second generation (Swedish-born children of immigrants) who have parents with a refugee background.

Knowledge gaps and research questions

As discussed already, little is known about the adult life course outcomes for children of refugees in general, including in Sweden. However, there is a considerable body of research on the children of immigrants. Studies have shown that the Swedish-born children of immigrants (the second generation, G2) often experience worse outcomes relative to the Swedish-born children of two Swedish-born parents. For example, they are more likely to be unemployed or have lower earnings (OECD 2015, 2018; Weber and Vogiazides 2022). They are also more likely to live in in deprived areas (Weber and Vogiazides 2022), more likely to remain in deprived areas (Vogiazides and Chihaya 2020), and are less likely to own their own home (Weber and Vogiazides 2022). The descendants of immigrants fare better than their parents in terms of educational attainment, but descendants of non-European immigrants are disadvantaged in their school performance and less likely to enroll in upper secondary education (Jonsson and Rudolphi 2011). On average, the second generation in Sweden are also likely to have worse health, despite the fact that their parents often have a health advantage (Wallace 2022). Compared with the children of Swedish-born parents, the adult descendants of immigrants—particularly Finns—have a higher risk of hospitalization for mental disorders (Leão et al. 2005), alcohol and drug abuse (Leão et al. 2006), type-2 diabetes (Li et al. 2013) and coronary heart disease (Sundquist and Li 2006). Although not necessarily a form of social disadvantage, notable differences are also found with respect to family formation. For example, the second generation in Sweden tend to have fewer children (Andersson et al. 2017; Mussino et al. 2021).

There are many potential explanations for these differences, including discrimination (Pager and Shepherd 2008; Quillian et al. 2019), lower levels of social capital or smaller social networks (Behtoui 2004), and explanations relating to the intergenerational transmission of disadvantage (Portes et al. 2005; Portes and Zhou 1993). It has been shown that family socio-economic status is of *"paramount importance"*, but that the social outcomes of immigrants and their children are *"moderated by immigrant selectivity and modes of incorporation"* (Zhou and Gonzales 2019, p. 395). Patterns of disadvantage among the second generation in Sweden do vary considerably by sex and parental country of birth (Weber and Vogiazides 2022). However,

there has been relatively little research that has examined directly the role of parental refugee background.

Despite what we know, it remains uncertain whether differentials for the G2 children of refugees—versus children of two Swedish-born parents—are the same as those for G2 children of non-refugee immigrants, or for refugees who arrived in Sweden as children. As compared with the G2, similar inequalities are sometimes observed for immigrants who arrived in Sweden as children (G1.5), varying considerably by age at arrival in Sweden (Åslund et al. 2015; Böhlmark 2008), and it remains to be seen whether this is also true when focusing on the children of immigrants who arrive as refugees.

We respond to these gaps by seeking to answer several research questions. Our first question asks: *How do the outcomes of Swedish-born children of refugees differ compared to other population groups, in particular the children of Swedish-born parents?* (RQ1). To answer this, we go beyond most research on the second generation by taking a more holistic approach and comparing outcomes by sex across multiple life domains, including education, earnings, housing, and health. This enables us to examine our second question: *To what extent do inequalities and disparities vary across different domains of life for female and male Swedish-born children of refugees?* (RQ2). Given that recent international research has called for studies of the second generation to examine the role of parental origins (e.g. Zhou and Gonzales 2019), we also examine variation by parental country of birth for Swedish-born children of refugees, which leads us to examine two further questions: *Do those with one refugee parent and one Swedish-born parent fare better than those with two refugee parents?* (RQ3) and: *Do patterns vary across individual parental countries of birth?* (RQ4). We are able to answer these questions thanks to the availability of highly detailed data on the whole population of Sweden.

DATA, MEASURES AND METHODS

Data

The analysis uses a collection of register data provided and managed by Statistics Sweden. These data include information on major demographic events such as births, deaths, migration events, and labor market activity (Ludvigsson et al. 2016). All members of the population have a unique person number, available to us in an anonymized format, which enables us to link individuals across registers, as well as to link children with their parents (Ludvigsson et al. 2009). These linkages have a high degree of accuracy, and all the data are of a high quality. For this analysis, we use information from various registers to capture six outcomes across multiple life domains: education, earnings, unemployment, housing support, number of children ever born, and sickness support. To allow us to examine these outcomes at age 30, we focus on individuals born from 1977-1990, and examine their outcomes from 2007-2020.

Our analysis is focused on the outcomes of Swedish-born children of immigrants who arrived as refugees (G2 children of refugees), and include several comparison groups, summarized in Table 1. We defined these groups using information from the Multi-Generation register, which allows linking data between individuals and their parents including their country of birth, as well as the STATIV database which contains detailed longitudinal information about migration-related events including types of residence permits (Statistics Sweden 2010, 2021). G2 children of refugees are defined as Swedish-born individuals with at least one parent who had a first residence permit indicating that they were a refugee. The other parent may also be a refugee, or a foreign-born non-refugee, or a Swedish-born. These three subgroups are distinguished in Table 1. We use Swedish-born children of Swedish-born parents as the main comparison group. We also include a further two groups of comparison: G1.5 children of non-refugees – Swedish-born children with two foreign-born parents, where neither parent is a refugee; and G1.5 refugees – foreign-born refugees who arrived under the age of 18. For G2 children of refugees, we examine variation by parental countries of birth, focusing on the six most common countries. Table 2 shows the most common parental countries of birth for G2 children of refugees, G1.5 children of non-refugees and G1.5 refugees. We exclude from all groups those who died or emigrated prior to the age of 30, and a small number of individuals who have missing data for any of the variables needed to identify the analytical sample and subgroups (parental country of birth, parental permit, the individual's country of birth). The final study population is more than 1.1 million individuals.

Table 1. Definitions and sub-population sizes (N=1,195,568)

Subgroup	Country of birth	Full sample		Men		Women	
		N	%	N	%	N	%
Children of Swedish-born parents	Sweden	1,060,582	88.7	548,218	88.5	512,364	88.9
G2 children of refugees [a]	Sweden	10,844	0.9	5,546	0.9	5,298	0.9
G2 children of non-refugees [b]	Sweden	59,423	5.0	30,782	5.0	28,641	5.0
G1.5 refugees [a]	Foreign-born	64,719	5.4	34,555	5.6	39,164	5.2
G2 children of refugees by parental migration background							
G2: Both parents are refugees	Sweden	5,914	54.5	2,984	53.8	2,930	55.3
G2: One refugee parent, one foreign-born non-refugee parent	Sweden	1,442	32.2	1,802	32.5	1,686	31.8
G2.5: One refugee parent, one Swedish-born parent [c]	Sweden	1,497	13.3	760	13.7	682	12.9
G2 children of refugees by parental country of birth [d]							
Iran	Sweden	2,190	20.2	1,121	20.2	1,069	20.2
Chile	Sweden	2,084	19.2	1,061	19.1	1,023	19.3
Lebanon	Sweden	1,097	10.1	539	9.7	558	10.5
Turkey	Sweden	664	6.1	315	5.7	349	6.6
Iraq	Sweden	662	6.1	361	6.5	301	5.7
Poland	Sweden	557	5.1	298	5.4	259	4.9
Other[e]	Sweden	3,040	33.1	1,851	33.4	1,739	32.8

[a] Where one or both parents are foreign-born refugees
[b] Where both parents are foreign-born, but neither is a refugee
[c] Where n=1247 have a Swedish-born mother, and a foreign-born refugee father, and n=195 have a Swedish-born father, and a foreign-born refugee mother
[d] Where one or both parents are refugees from the given country, and all other parents are foreign-born non-refugees or Swedish-born
[e] Includes n=550 where two refugee parents do not share the same country of birth

Table 2. Top-12 parental countries of birth for G2 and G1.5

Subsample	Men		Women	
	N	%	N	%
G2 children of refugees [a] (n=10,844)				
Iran	1,121	20.2	1,069	20.2
Chile	1,061	19.1	1,023	19.3
Lebanon	539	9.7	558	10.5
Turkey	361	6.5	349	6.6
Iraq	315	5.7	301	5.7
Poland	298	5.4	259	4.9
Syria	232	4.2	219	4.1
Viet Nam	206	3.7	192	3.6
Former Yugoslavia	126	2.3	126	2.4
Ethiopia	123	2.2	119	2.3
Eritrea	120	2.2	113	2.1
Romania	75	1.4	80	1.5
Other [b]	969	17.5	890	16.8
G2 children of non-refugees [c] (n=59,423)				
Finland	8,172	26.6	7,594	26.5
Turkey	4,491	14.6	4,140	14.4
Former Yugoslavia	2,920	9.5	2,698	9.4
Poland	1,196	3.9	1,174	4.1
Greece	703	2.3	614	2.1
Chile	512	1.7	503	1.7
Syria	474	1.5	441	1.5
Hungary	381	1.2	356	1.2
Lebanon	357	1.2	336	1.2
Denmark	353	1.1	336	1.2
Morocco	311	1.0	315	1.1
Viet Nam	296	1.0	286	1.0
Other [d]	10,617	34.5	9,848	34.4
G1.5 refugees (n=64,719) [e]				
Iraq	6,047	17.5	5,092	16.9
Former Yugoslavia	5,379	15.6	4,815	16.0
Bosnia and Herzegovina	5,064	14.7	4,686	15.5
Iran	4,471	12.9	3,710	12.3
Chile	1,371	4.0	1,236	4.1
Lebanon	1,368	4.0	1,230	4.1
Syria	1,776	3.4	1,029	3.4
Turkey	1,097	3.2	995	3.3
Somalia	984	2.9	691	2.3
Afghanistan	836	2.4	642	2.1
Viet Nam	585	1.7	531	1.8
Romania	503	1.5	448	1.5
Other [f]	5,674	16.4	5,059	16.8

[a] Where one or both parents are foreign-born refugees

[b] Includes n=550 where two refugee parents do not share the same country of birth

[b] Where both parents are foreign-born, but neither is a refuge

[d] Includes n=13,157 where the parents do not share the same country of birth

[c] Where both parents are foreign-born, and one or both are refugees; excluding n=4188 where the two refugee parents do not share the same country of birth

Outcome variables

The analysis examines six outcomes which measure multiple domains of life, including education (educational achievement), work (two outcomes: unemployment support and earnings), residential circumstances (housing support), family formation (number of children ever born) and health (sickness support). Each outcome is measured at age 30, which is made possible for different birth cohorts because we use longitudinal data for all individuals from 1990-2020. The number of children ever born is calculated using the Multi-Generation Register (Statistics Sweden 2010), and all other outcome variables are calculated using data from the Longitudinal Integration Database for Health Insurance and Labour market studies (LISA) (Ludvigsson et al. 2019).

Variables are measured in a way that enhances our ability to compare different population subgroups within and across each outcome. Education is measured as a binary variable, according to whether individuals have obtained any form of tertiary education or not. Unemployment support is also measured as a binary variable, based on the receipt of any social insurance income relating to unemployment support over the past year, or not. Earnings is a continuous variable, and includes the individual's annual earnings from all sources, such as salary or investments, adjusted for inflation using the annual Consumer Price Index (Statistics Sweden 2022), with 2002 as the index year. Housing support is a binary variable measured at the household level, and thus captures whether any household member was in receipt of housing support that year, or not. Family formation is operationalized as a count variable of all biological children ever born (excluding children born abroad who have never resided in Sweden, which is relatively uncommon even for immigrants who arrived in Sweden as adults, who are not part of this study). Finally, sickness support is a binary indicator that measures whether individuals have received any social insurance income over the past year for sick leave that exceeds 14 consecutive days, or for rehabilitation support, pregnancy support, or contagious disease support (Ludvigsson et al. 2019). This measure of sickness support does not include caring allowances for children or close relatives.

Analysis plan

Our analysis uses generalized linear models, varying the link function according to the outcome. We estimate predicted probabilities from each of the models, and present these with 95% confidence intervals, although we note that these confidence intervals merely represent variation in the population (since our data are for the entire population). All models adjust for birth cohort, and also for education (measured as dummy variables of primary, secondary and tertiary education) except where tertiary education is the outcome variable. As such, predicted probabilities can be used to make standardized comparisons across different groups of the population. The models measure migrant background in different ways (e.g. sometimes grouping those with refugee parents and sometimes separately analyzing groups by parental country of birth), but the Swedish-born children of Swedish-born parents (labelled 'two Swedish-born parents' or 'both Swedish-born') are used as the reference group throughout. All analyses are stratified by sex and performed in Stata 17.

RESULTS

Figure 1 presents the findings for each of the six outcomes (panels A-F) for women and men. The results indicate that there is considerable heterogeneity in outcomes for G2 children of refugees within and across domains, as well as heterogeneity by gender. Notably, female and male Swedish-born children of refugees (G2 children of refugees) experience material disparities in several outcomes.

The likelihood of obtaining tertiary education for G2 children of refugees suggests a small educational disadvantage for women, but a slight educational advantage for men, as compared with women and men who have Swedish-born parents (Figure 1, panel A). Overall, however, women have substantially greater chances of obtaining tertiary education compared to men. It is also interesting to note that the average tertiary education of G2 children of refugees is much closer to that of individuals with two Swedish-born parents than it is to G1.5 refugees or G1.5 children of non-refugees. On average, G2 sons of refugees have 11.0% lower standardized annual earnings compared with sons of Swedish-born parents (Figure 1, panel B). As with the results for all outcomes other than education, this is despite controlling for education. The magnitude of earnings inequality is substantially smaller for G2 daughters of refugees compared with daughters of Swedish-born parents (2.6% lower), although all female subgroups earn substantially less than their male counterparts (for example, female G2 children of refugees earn 77.2% less than male G2 children of refugees).

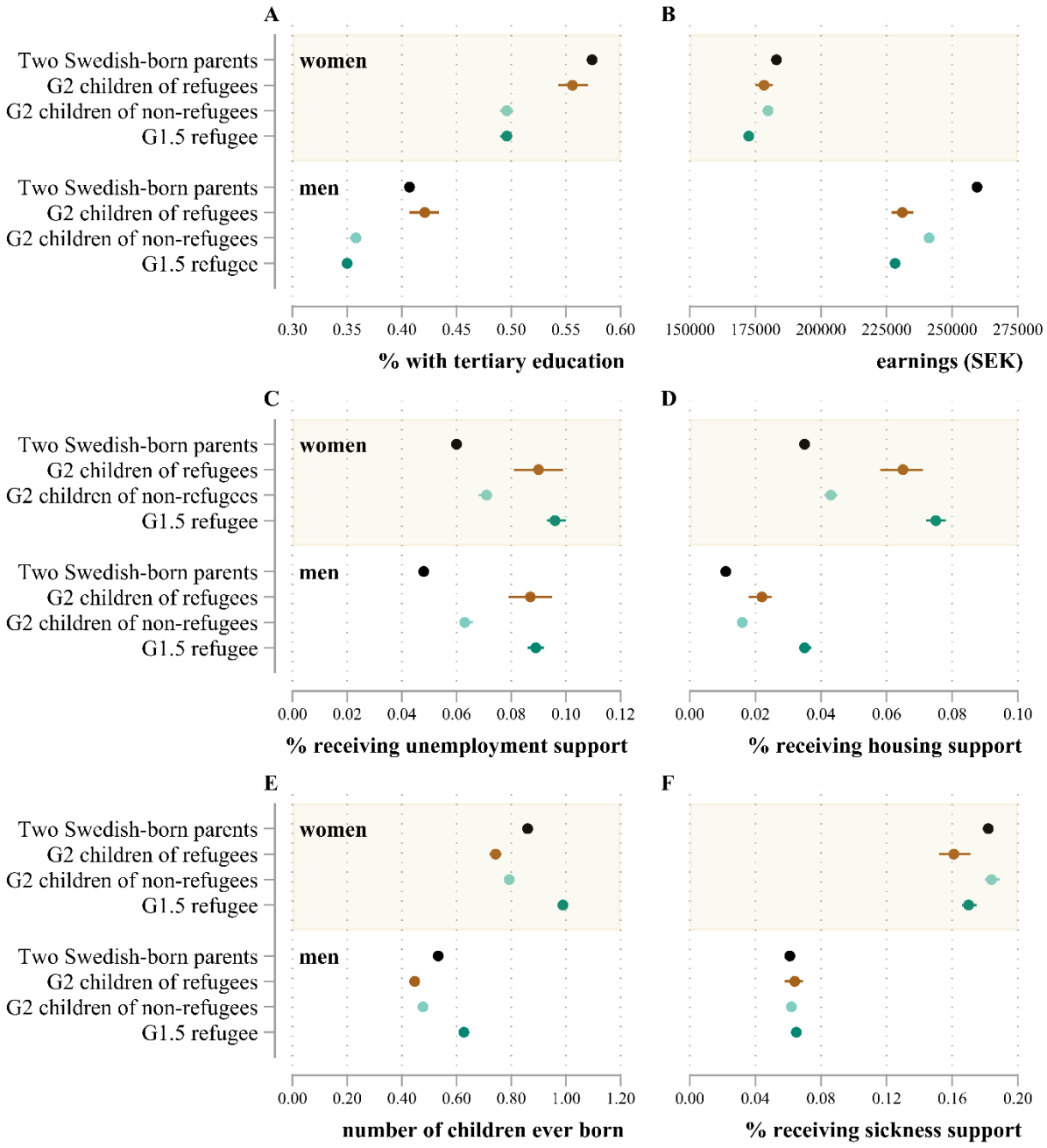

Figure 1 Differences in outcomes at age 30 between children of Swedish-born parents, G2 children of refugees, G1.5 children of non-refugees, and G1.5 refugees across multiple domains of life. Each panel presents separate models for women and men. Estimates presented in panels A, C, D and F are predicted estimates from logistic regression models, estimates presented in panel B are predicted estimates from linear regression models; and estimates presented in panel E are predicted estimates from negative binomial regression models. All models control for birth cohort; models presented in panels B-F additionally control for education.

Both G2 sons and daughters of refugees have a much higher risk of being unemployed or living in a household that receives housing support (Figure 1, panels C and D). Unemployment support rates are typically around 3-4 percentage points higher for G2 children of refugees, as compare with those who have two Swedish-born parents. Although the same is true for G1.5 refugees, this is not the case for G1.5 children of non-refugees. The magnitude of differentials in housing support are similar to those for unemployment support. However, they are smaller for G2 sons of refugees as compared with G2 daughters of refugees, even after accounting for the fact that men are less likely than women to be living in households that receive housing support (which is due to higher rates of lone parenthood among women than among men).

With respect to family formation, both female and male G2 children of refugees exhibit a lower likelihood of being a parent by the age of 30, as compared with those who have two Swedish-born parents (Figure 1, panel E). This depressed level of fertility is not dissimilar to that of G1.5 children of non-refugees, but in contrast to the higher levels of childbearing among G1.5 refugees. These differences by migration background are observed for women and men, although women in all groups tend to have more children, which is to be expected given that they typically begin childbearing earlier than men.

For the final outcome, sickness support, female G2 children of refugees are around 2 percentage points less likely to receive support compared with female children of Swedish-born parents (Figure 1, panel F). Female G1.5 refugees also exhibit this 'sickness advantage', but it is not observed for female G1.5 children of non-refugees, and it is also not observed for men. Male rates of sickness support are not only much lower than those for women overall, but also seem to exhibit little variation by migration background, at least based on the groups shown in Figure 1 (panel F).

Different parental backgrounds

Given that disparities exist for G2 children of refugees, at least in some domains, it is reasonable to ask whether these vary according to the migration background of both parents. In particular, it may be that the outcomes are very different for those with two parents who arrived as refugees, as compared with those who have one parent who arrived as a refugee and one parent who is Swedish-born. Indeed, evidence of this is shown in Figure 2.

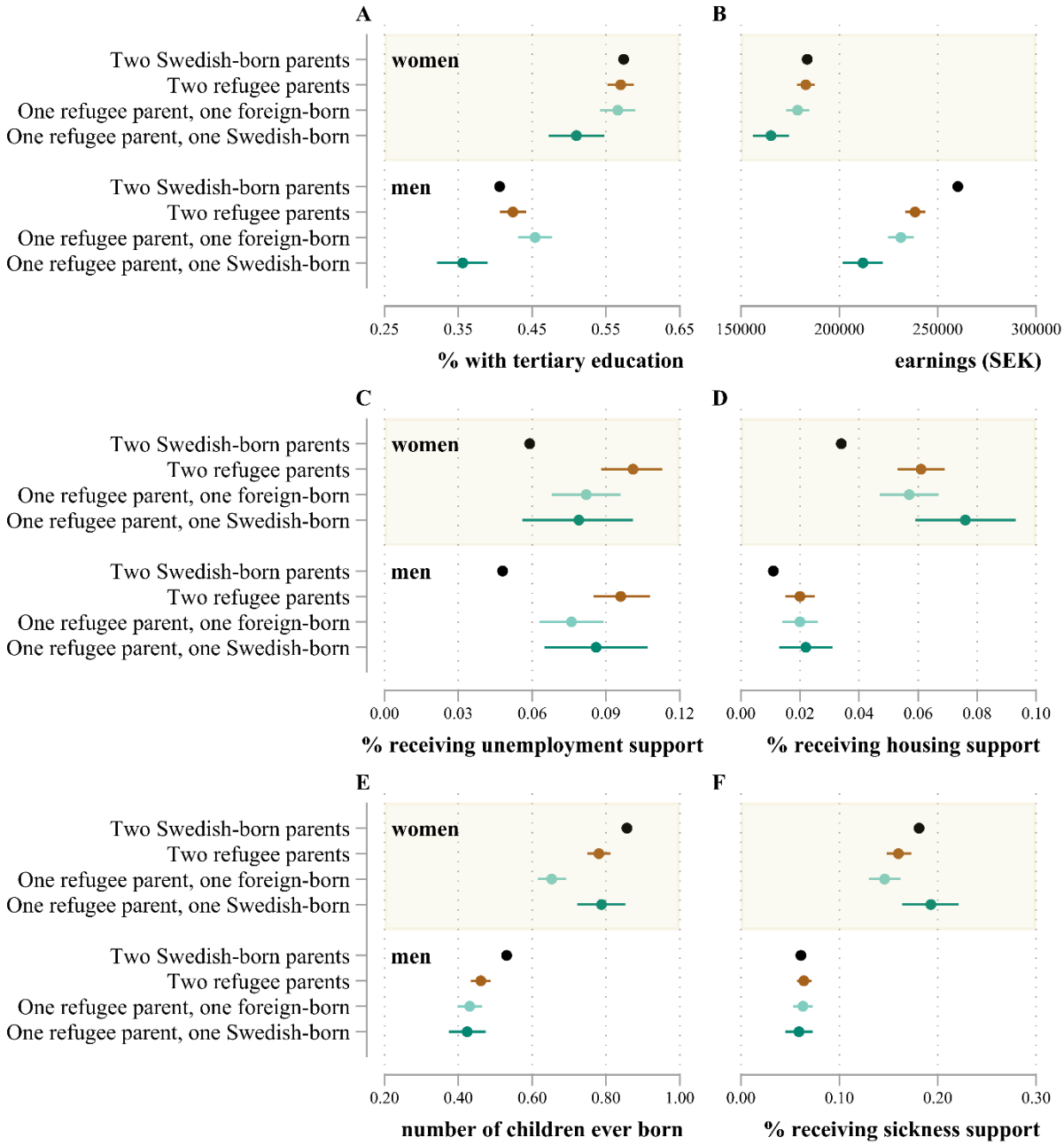

Figure 2 Differences in outcomes at age 30 by the nativity and refugee background of both parents. Subgroups of parental compositions within G2 children of refugees are: G2 children of refugees with two refugee parents, G2 children of refugees with one refugee parent and one foreign-born non-refugee parent, and G2.5 refugees with one refugee parent and one Swedish-born non-refugee parent. Each panel presents separate models for women and men. Estimates presented in panels A, C, D and F are predicted estimates from logistic regression models, estimates presented in panel B are predicted estimates from linear regression models; and estimates presented in panel E are predicted estimates from negative binomial regression models. All models control for birth cohort; models presented in panels B-F additionally control for education.

There are notable inequalities in tertiary education for women and men with one refugee and one Swedish-born parent, not only as compared with those who have two Swedish-born parents but also as compared with those who have two refugee parents. Compared with these other groups they are as much as 5 percentage points less likely to have tertiary education. Somewhat similar patterns of relative inequality are observed for earnings, such that those with one refugee and one Swedish-born parent fare worst, even after controlling for their (lower average) educational attainment. This is in contrast to the results for unemployment support, where women and men with two refugee parents fare worst. However, it is also notable that women with one refugee and one Swedish-born parent are more likely than the other groups to receive housing support or sickness support. Figure 2 also shows that these patterns are not simply due to parental heterogamy because there is a marked difference in most outcomes for those who only have one refugee parent depending upon whether their other parent is Swedish-born or a foreign-born non-refugee.

Parental country of birth

Figure 3 provides a more detailed analysis of G2 children of refugees, separately for the six most common parental countries of birth. Again, these results show that there is substantial variation. Iran stands out as a parental country of origin where children fare better across most outcomes, not only compared with other parental origin countries for G2 children of refugees, but also sometimes compared with the children of Swedish-born parents. This is especially true for women's education and earnings where the female children of Iranian refugees have a substantial advantage over all other comparison groups. It is also true for the education of men. Both female and male children of Iranian refugees also have a lower likelihood of being parents at age 30 compared with all other groups. On average they have fewer than 0.5 children (women 0.46; men 0.29), in stark contrast to the children of refugees from Lebanon who have around twice as many children on average (women 1.27; men 0.47), suggesting a far earlier transition to parenthood.

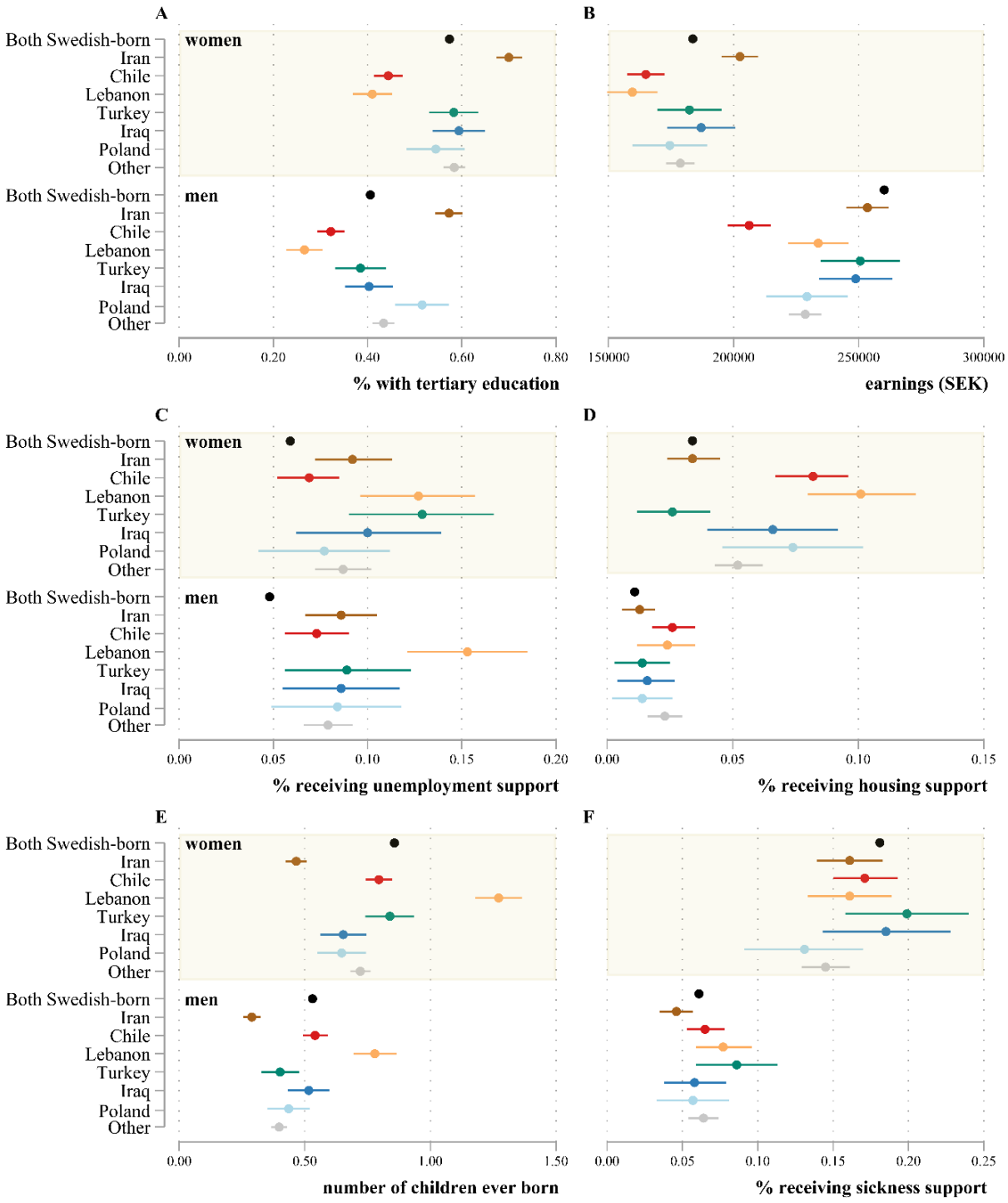

Figure 3 Differences in outcomes at age 30 for those with two Swedish-born parents and G2 children of refugees, by parental country of birth. Subgroups are defined according to the refugee parent's (or parents') country of origin, classifying the G2 children of refugees with two refugee parents who share the same country of origin, the G2 children of refugees with one refugee parent and one foreign-born non-refugee parent, and G2.5 refugees with one refugee parent and one Swedish-born non-refugee parent. Those with two refugee parents who do not share the same country of birth are grouped in the Other category. Each panel presents separate models for women and men. Estimates presented in panels A, C, D and F are predicted estimates from logistic regression models, estimates presented in panel B are predicted estimates from linear regression models; and estimates presented in panel E are predicted estimates from negative binomial regression models. All models control for birth cohort; models presented in panels B-F additionally control for education.

In general, the children of refugees from Chile and Lebanon are more likely to experience social disadvantage than other parental origin groups; although this varies by sex and across outcomes. The children of Lebanese refugees are the most disadvantaged group with respect to education, earnings, unemployment, and housing support. Although among men, the children of Chilean refugees have the lowest average earnings, and marginally higher levels of housing support. Among women, the children of Turkish refugees have similarly high levels of unemployment support, again as compared with the children of Lebanese refugees. The female and male children of Turkish refugees also exhibit the highest levels of sickness support as compared with other groups, including the children of two Swedish-born parents.

Considering the other groups, the outcomes for children of refugees from Poland, Turkey and Iraq are generally in between those from Iran (who tend to be more advantaged) and those from Chile and Lebanon (who are more disadvantaged). In some cases, the children of Polish refugees appear to be relatively advantaged compared with other groups, for example with respect to male education or female unemployment and sickness support. In other cases, they appear to relatively disadvantaged, for example with respect to female education or the earnings of women and men. The results for children of refugees from Iraq and Turkey are interesting because they are typically more similar (than other parental origins) to the results for children with two Swedish-born parents. One notable difference is that the daughters of Iraqi refugees have higher rates of housing support than the daughters of Turkish refugees, whereas the opposite is true for unemployment support.

Another interesting finding that emerges from the comparison across outcomes is the ubiquity of unemployment inequality, as opposed to the heterogeneity that is observed for other outcomes. It is only for unemployment support that differentials are observed in a similar direction for all parental origin groups – in this case representing more unemployment – relative to those with two Swedish-born parents. Relative to this same reference group, the sons of refugees from all parental origin groups also have lower earnings, but this is not true for daughters, especially those with Iranian parents who arrived as refugees. Taken together, these findings suggest a complex picture of heterogeneous disparities, which in turn suggest that adaptation is segmented, varying across groups and across outcomes, as we discuss further below.

DISCUSSION

In this article we have examined the adult outcomes of children of refugees across multiple domains of life. We used internationally unique data to study the case of Sweden, not just focusing on the Swedish-born children of refugees, but also comparing them with other groups, including the Swedish-born children of Swedish-born parents, who represent what is often referred to as the mainstream population.

Compared with the mainstream population, it is clear that native-born children of refugees are experiencing inequalities and disparities in many domains of life, at least at age 30. However, it is also clear that inequalities and disparities are extremely heterogeneous, varying according to the intersections between outcome, sex, and parental background. Although Swedish-born children of refugees typically have lower fertility at age 30, they experience inequalities in earnings, unemployment and housing support. This is true for both women and men, with men facing larger inequalities in earnings and women facing larger inequalities in terms of housing support. Interestingly, similar disparities (versus the mainstream population) are also observed for the foreign-born (G1.5) children of refugees, in terms of earnings, unemployment and housing support, but not for fertility. This suggests that early parenthood is not a straightforward explanation for socioeconomic disadvantage, at least for the native-born children of refugees.

We also show that inequalities and disparities vary considerably by parental country of birth. One clear finding is that there is a marked difference in most outcomes for those who have one refugee parent and one Swedish-born parent, as compared with those who have two parents who are refugees. However, despite predictions from the literature that adaptation is more likely for immigrants with a native-born partner (Lichter et al. 2007), this does not appear to be the case for their children, at least in the context of this study. Our results show that this form of ‘mixed’ parentage is associated with socioeconomic disadvantage, for example with respect to education and earnings.

Recent international research has called for studies of the second generation to examine the role of parental origins (e.g. Zhou and Gonzales 2019), and we also respond to this by separately analyzing the six most common countries of birth. Children of refugees from Lebanon or Chile are the most likely to experience disadvantage, in contrast to those with parents from Poland or Iran. The children of Lebanese refugees are not only the most disadvantaged group, in particular with respect to education and employment, but also stand

out as the only parental origin group with a substantially higher likelihood of childbearing at age 30, as compared with the mainstream population.

Segmented adaptation

In its most straightforward form, adaptation can be defined as the convergence of behavior across 'immigrant generations' – i.e. immigrants (G1), their children (G2), and grandchildren (G3) – as compared with a reference group of the native-born population (Drouhot and Nee 2019; Zhou and Gonzales 2019). By contrast, the theory of segmented adaptation predicts that some descendants of immigrants will be more likely to experience inequalities and disparities as compared with the native-born population, due to a socially stratified process of adaptation toward different 'segments' of society (Zhou and Gonzales 2019). Although it is difficult to adjudicate between these explanations, not least because the concept of adaptation can be applied to many aspects of life that lie beyond the scope of this study, our results certainly appear to provide evidence in support the theory of segmented adaptation. Inequalities and disparities exist in most domains of life for the G2 children of refugees, especially for those with parents who were born in certain countries. Those with parents from Chile and Lebanon face sizeable inequalities with respect to education, earnings and housing, and their outcomes are materially different from those for the mainstream population. At the very least, the magnitude of these differentials suggests that adaptation is nowhere near complete for these parental origin groups. Moreover, this is in stark contrast to the patterns of advantage that we observe for the children of Iranian refugees as compared with the mainstream population, (even if they, like other G2 parental origin groups, also tend to have higher risks of receiving unemployment support), which indicates that adaptation for the children of refugees is stratified by parental country of birth.

Although we draw many of our conclusions about inequalities, disparities and adaptation by making comparisons with a reference group of the mainstream population—the Swedish-born children of two Swedish-born parents—it is important to note that other population groups may serve as a reference when evaluating the social progress of the Swedish-born children of refugees. The concept of segmented adaptation has been contrasted with the concept of 'second-generation advantage', which evaluates adaptation by comparing the second generation with foreign-born individuals who have the same national origin (Alba and Nee 2005; Zhou and Gonzales 2019). With reference to our analysis, we can evaluate this by comparing Swedish-born children of refugees (G2) with those who also have a refugee background, but were born abroad and arrived in Sweden as children (G1.5). On average, these G1.5 refugees have had

less exposure to Sweden (by virtue of being born abroad), including its norms and institutions, which means that comparisons between G2 and G1.5 refugees provide us with an indication of how adaptation varies according to exposure to Sweden, as well as an assessment of the 'second-generation advantage' concept.

Overall, G2 children of refugees do have higher levels of education and earnings, and lower levels of housing support, as compared with G1.5 refugees, providing evidence of a second-generation advantage. However, this is not the case for unemployment, where the receipt of support is very similar for G1.5 and G2 children of refugees (women and men). The results for sickness support are also not dissimilar for G1.5 and G2 children of refugees (men, and to a lesser extent women), and the earnings of male G1.5 and G2 children of refugees are much more similar to each other than they are to the mainstream norm. Leaving aside considerable differences in fertility (with G2 children of refugees much less likely than G1.5 to be parents at age 30), these results suggest only partial evidence in support of 'second-generation advantage', which is further complicated by examining the role of parental country of birth, including the results for those who have one foreign-born and one Swedish-born parent (who are sometimes referred to as generation 2.5). In general, those with two refugee parents fare better than those with one refugee parent and one Swedish-born parent, which suggests that a native-born parent is not necessarily protective against the risk of experiencing inequality for G2 children of refugees.

In addition to comparisons with G1.5 refugees, our study also makes comparisons with the Swedish-born children of migrants who are not refugees (G1.5 children of non-refugees). In doing so, we find that there are elements of both advantage and adversity that appear to be specific to the children of refugees. Notably, relative to the mainstream population, the overall educational advantage for male G2 children of refugees and health advantage for female G2 children of refugees are not found for G1.5 children of non-refugees. That said, we do find that female and male G2 children of refugees are more disadvantaged than equivalent G1.5 children of non-refugees with respect to the receipt of unemployment and housing support. As with the majority of our findings, this also points toward a process of adaptation that is complex and highly contingent on parental background.

Of course, our results are not without their limitations. In particular, we have focused only on age 30, limited our attention to specific outcomes, and not gone beyond the second generation to examine the third or later generations. These limitations are largely a feature of the data and context that we have studied. However, future research may examine other points

in the life course, add additional outcomes, and focus on the disparities that are experienced by the grandchildren of refugees. Given the young age profile of this population in many contexts (such as Sweden), the latter may be more feasible in the near future by examining child outcomes. Our analysis found limited evidence of health inequalities for the children of refugees. However, one limitation of this conclusion is that we have only measured health using the receipt of sickness support, a form of social insurance that is related to employment. Future research, on Sweden or elsewhere, may benefit from the addition of more direct measures of mental or physical health (which were unavailable in the collections of data that we used here).

Despite these limitations, our approach highlights the number of insights that can be gained by examining multiple domains of life using a harmonized research design. Overall, we interpret our results as providing some evidence in support of segmented adaptation for the children of refugees, while at the same time demonstrating that adaptation appears to be contingent on the intersection between migration background, sex, and the domain of life that is considered. Our study develops new understanding about the lives of children of immigrants, in particular by undertaking an innovative analysis of children of immigrants who arrived as refugees. Our findings suggest that adaptation is far from a uniform process for these children of refugees, more than 30 years after their parents' arrival. Given that many countries continue to receive large numbers of refugees and asylum seekers, many of whom will be parents to the new second generation, our findings should provide motivation for a new body of research that seeks to understand and eliminate social disadvantage among the children of refugees.

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