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Intergenerational Mobility of Immigrants in 15 Destination Countries

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ABSTRACT

Intergenerational Mobility of Immigrants in 15 Destination Countries

We estimate intergenerational mobility of immigrants and their children in fifteen receiving countries. We document large income gaps for first-generation immigrants that diminish in the second generation. Around half of the second-generation gap can be explained by differences in parental income, with the remainder due to differential rates of absolute mobility. The daughters of immigrants enjoy higher absolute mobility than daughters of locals in most destinations, while immigrant sons primarily enjoy this advantage in countries with long histories of immigration. Cross-country differences in absolute mobility are not driven by parental country-of-origin, but instead by destination labor markets and immigration policy.

JEL Classification: J15, J61, J62
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1 Introduction

In recent decades, rates of immigration to developed countries have been high and rising. In 2019, 10-30% of the population of most OECD countries was born abroad and a similar range of children aged 0-14 had at least one foreign-born parent (OECD/EU, 2023).[1] Consequently, the economic integration of immigrants and their children has become an increasingly important input into a country's economic success.

Children of immigrants may face challenges to upward mobility at school or in the labor market if, for example, they grow up in segregated neighborhoods or suffer from discrimination. Alternatively, children of immigrants may be poised to move up the ladder if their parents are able to transmit values or skills beyond what their income would imply, or if their parents move to locations with better prospects for upward mobility. Recent research has characterized the economic trajectories of children of immigrants in specific countries (Borjas, 2006; Abramitzky et al., 2021; Bratu & Bolotnyy, 2023; Connolly et al., 2023; Jensen & Manning, 2023; Van Elk et al., 2024), but these forces may differ across destinations depending on the composition of the immigrant population, aspects of immigration policy, or features of the educational system and the labor market.[2] A comparative perspective helps to identify differences in immigrants' integration across receiving countries and can shed light on the factors correlated with such differences.

A key challenge for cross-country comparisons is the lack of internationally consistent data that includes information on parental and own income for children of immigrants and locals. In this paper, we compile and harmonize data from 15 immigrant-receiving countries for which high-quality administrative or survey data exist to provide a comparative perspective on the labor market integration of immigrants and their children in high-income countries. Our data include 11 European and four non-European countries, representing 44% of global immigrants and 68% in high-income countries.[3] We analyze administrative data in 13 destination countries and supplement with surveys for two countries, allowing us to create links between immigrant parents and children. For many of our included countries, we are the first to use these data to study the intergenerational mobility of immigrants. Access to most of our data sources is restricted, so these sources are rarely harmonized and used for cross-country analysis.

We focus on children born in destination countries from 1978 to 1984, and consider their labor market outcomes around 30 years later, following Chetty et al. (2020) for the full US population

[1] https://data.oecd.org/migration/foreign-born-population.htm.

[2] There is limited work comparing the children of immigrants across different destinations. Notable exceptions are papers using survey data to compare outcomes across a small number of countries, e.g., Algan et al. (2010) and Bucca & Drouhot (2024).

[3] https://www.un.org/development/desa/pd/content/international-migrant-stock.

and Abramitzky et al. (2021) for immigrant/local born comparisons in the US. With these data at hand, we can estimate differences in intergenerational mobility between children of immigrants and children of the local born. Finally, we use our estimates to explore why immigrant income gaps remain large into the second generation in some destination countries, but not in others.

We start by establishing two facts in our data: (1) Large income gaps for first-generation immigrants that diminish in the second generation: In many destinations, first-generation immigrants have lower levels of income than the local born. The median income rank gap across destination countries in our data is -5 rank points. The median gap between second-generation immigrants (children of immigrants) and the children of the local born is much smaller, less than 1 rank point. (2) Gender differences in income gaps: Daughters of immigrants experience smaller income gaps than do the sons of immigrants in all destination countries. The median rank gap is -3 points for sons and zero points for daughters.

We then use parent-child links to document **three new facts** about cross-country income gaps between the children of immigrants and children of local-born. **(1) Around half of the cross-country variation in second-generation income gaps can be explained by parental income differences.** Children of immigrants tend to be raised in poorer households than children of the local born. Thus, countries with a smaller first-generation income rank gap (e.g., the US and Canada) also have smaller second-generation income rank gaps. We confirm the role of parental income in an Oaxaca-Blinder decomposition. **(2) After accounting for parental income, remaining income gaps for the children of immigrants are driven by differential rates of absolute mobility.** By absolute mobility, we mean higher or lower income for children raised at the bottom of the income distribution. Differences in relative mobility (that is, a lower correlation between the income of parents and children) play a much smaller role in explaining income gaps between children of immigrants and locals. **(3) In most countries, daughters of immigrants exhibit *higher* absolute mobility than daughters of locals. Sons of immigrants only enjoy this advantage in non-European countries with long histories of immigrant incorporation (Australia, Canada, Israel and the US), as well as in the UK.** As a result, daughters of immigrants have higher income than daughters of local born raised at the same point in the income distribution in most destination countries, while sons of immigrants often have lower income.

The second part of the paper considers explanations for differences in absolute mobility between children of immigrants and children of locals across destinations. We emphasize that this exploration is based on cross-country comparisons and, as such, we can only provide suggestive rather than causal evidence for these mechanisms. We divide possible explanations into two categories: (1) differences between immigrant and local-born parents, beyond measured income, and (2) differential effects of destination-country characteristics (such as aspects of the labor market,

educational system, and immigration policy) on immigrant families.

Differences in parental attributes – including parental country-of-origin – cannot explain cross-country variation in the absolute mobility gap. First, for most countries, other parental characteristics (i.e., parental wealth, geographic location, and industry of employment) cannot account for the remaining gap between the children of immigrants and the local born.[4] Second, differences in the composition of parental sending countries do not help explain variation in absolute mobility across destinations. For example, China is a large sending country in Canada and Turkey is a large sending country in Austria. However, controlling for parental sending country does not affect our estimates of destination country differences in absolute mobility.

Given that parental attributes cannot account for cross-country differences in absolute mobility, we turn as an alternative to associations with destination country attributes. First, we document that the mobility gap for sons is higher in countries with *lower* income inequality. Sons of immigrants may be excluded or chose not to participate in equality-enhancing institutions like vocational training, apprenticeships, and union membership. Indeed, the mobility gap in income for sons is strongly correlated with a mobility gap in employment rates (extensive margin), which can be depressed by weak school-to-work transitions. Daughters of immigrants are less sensitive to destination-country inequality. Second, we find that both sons and daughters of immigrants enjoy higher mobility in countries with access to citizenship for the second generation and positive attitudes toward immigrants.

The rest of the paper is organized as follows: in the next section, we summarize the existing literature on the outcomes of children of immigrants and intergenerational mobility more broadly. In Section 3, we describe our data sources and sample construction in more detail. We present an overview of the patterns of convergence in income in Section 4, and decompose remaining income gaps fully in Section 5. We consider a series of relevant mechanisms in Section 6, and finally, we conclude. We focus on the cross-country comparisons in the main body of the paper, but we also offer a detailed appendix with results for each destination country.

2 Related literature

The primary contribution of this paper is to provide comparable estimates of immigrants' intergenerational mobility across the developed world. We compile and harmonize administrative or survey data for 15 receiving countries, allowing us to document how the economic assimilation of immigrants and their children varies across countries. Focusing on a large group of receiving countries also enables us to make progress on the question of *why* mobility rates might differ

[4] Although we lack measures of many relevant parental attributes (e.g., language skills, education, ethnic capital), we control for as many parental attributes as we can.

across countries. In this way, our paper is similar to Brell et al. (2020), which compares the employment and earnings trajectories of refugees across nine destinations.

Earlier work on the economic performance of second-generation immigrants relied on cross-sectional data from censuses, surveys, or administrative sources (see, for instance, Borjas, 1993; Card et al., 2000; Aydemir et al., 2009). Cross-sectional data do not allow researchers to control for parental income and other controls for socio-economic status during childhood. This research shows that children of immigrants in the US and Canada converge with the children of local-born parents on educational and labor market outcomes, whereas, in European destinations, the children of immigrants tend to remain behind (Liebig & Widmaier, 2009; Algan et al., 2010; Gries et al., 2022; Berbée & Stuhler, 2023; Bucca & Drouhot, 2024).[5] These studies also find that the daughters of immigrants fare better than the daughters of the local born, while sons tend to fare worse.

More recently, a series of studies have used linked parent-child data to study the intergenerational mobility of immigrants in specific receiving countries. Taken together, these studies find substantial variation across receiving countries in the performance of second-generation immigrants. Without access to harmonized cross-country data, it is hard to know whether these differences in performance stem from differences in sample construction and variable definitions or from actual differences in the experience of children of immigrants across destinations. Moreover, since linked data on parent and child outcomes have only recently become available in many destination countries, we lack comparable estimates for many important immigrant destinations. Abramitzky et al. (2021) and Connolly et al. (2023) document higher rates of upward mobility for children of immigrants than for children of locals in the US and Canada, respectively. In Denmark, the children of immigrants achieve parity with the children of the local born raised at the same point in the income distribution (Jensen & Manning, 2023). By contrast, children of immigrants earn less than children of the local born raised at the same point of the income distribution in Sweden and the Netherlands (Bratu & Bolotnyy, 2023; Van Elk et al., 2024).[6]

Our work also contributes to the large literature on the specific barriers faced by (or advantages enjoyed by) the children of immigrants. These barriers may include poor language skills (Bleakley & Chin, 2008), particularly for children who migrate with their parents at older ages (Connolly et al., 2023; Arellano-Bover et al., 2024), cultural heritage from parental country-of-origin (Fernández & Fogli, 2009), and the limitations of living in enclave neighborhoods (Borjas,

[5] Large-scale surveys that ask about parental background can also be useful. Belzil & Poinas (2010) use the Génération 98 conducted in France to show that most of the college attainment gap for second-generation immigrants relative to the children of the French born are due to differences in parental education levels.

[6] Deutscher (2020) builds a "pseudo-panel" from birth cohort and country-of-origin cells in Australian census data. As in the US and Canada, children of immigrants earn 1-3 rank points more than children of the Australian born raised at the same point in the income distribution.

1992; Bertrand et al., 2000).[7] Yet, despite these disadvantages, the children of immigrants can out-perform the children of the local-born in the labor market, particularly in the US, leading to the widely-studied phenomenon called the "immigrant paradox" (Marks et al., 2014; Feliciano & Lanuza, 2017). The children of immigrants tend to have higher expectations and performance than similar peers in school in the US (Feliciano & Lanuza, 2016; Figlio et al., 2024) (Carlana et al. (2022) show a less positive pattern for the children of immigrants in Italy). Fouka (2023) emphasizes that the children of immigrants are more successful in countries that facilitate integration. Children of non-refugee immigrants fare better than the children of refugees (Adnan et al., 2023).

Secondarily, we contribute to the literature comparing rates of intergenerational mobility across countries.[8] A number of studies have provided a cross-country comparison of *overall* intergenerational mobility. Chetty et al. (2014a), along with Smeeding et al. (2011), Corak (2013), Bratberg et al. (2017), Winship (2018), Connolly et al. (2019), Deutscher & Mazumder (2020), and Nybom (2024), document that relative mobility is lowest in the US and the UK, middling in Germany, and highest in Canada, Australia, and the Scandinavian countries. Following Chetty et al. (2017), Manduca et al. (2024) instead compare the fraction of children who earn more than their parents across countries. We provide the first international comparison focusing on the mobility of children of immigrants, a large and growing group in high-income countries.

3 Data

Our main analysis is based on linked parent-child administrative data for 13 destination countries. These linked data typically contain information on parental country of birth, which can be used to identify children of immigrants, and also allow us to observe and control for parental income. Two destination countries in our sample, Germany and the UK, do not provide linked administrative data that contain information on both parental country of birth and parental income. In those countries, we instead make use of large surveys with parent-child links, and information on country of birth and income measures for both generations.

In order to ensure that our results are comparable across countries, we apply the same sample and variable definitions for each of the 15 countries included in our analysis. Our sample and variable definitions closely follow those of Chetty et al. (2020). We follow Chetty et al. (2020) because their aggregate results for the US are available to other researchers and have been used by Abramitzky et al. (2021) to study the intergenerational mobility of the children of immigrants

[7] Immigrant parents who receive language training in Denmark have children who are more likely to finish school and less likely to be convicted of a violent crime (Foged et al., 2023).

[8] A large literature estimates rates of intergenerational mobility within countries. See, e.g., Björklund & Jäntti (1997); Dahl & DeLeire (2008); Lee & Solon (2009); Chetty et al. (2014b); Soria (2022); Kenedi & Sirugue (2023), see also the recent review by Mogstad & Torsvik (2023).

in the US.

For our main analysis, we consider children born in 1978-1984 in one of the 15 receiving countries. We do not include children born abroad, sometimes referred to as "generation 1.5." We measure children's total individual income in adulthood in 2014 and 2015; that is, at age 30 to 37 depending on birth year.[9] We focus on this age range because the vast majority of people will have finished education and entered the labor market by age 30.[10] We keep children in our sample if they are residents and are fully tax liable in the relevant country in both 2014 and 2015.[11] Following Chetty et al. (2020), each of these children is assigned a measure of parental income based on the sum of total parental income from 1994 to 2000. Total income for both parents and children include labor market income, self-employment income, capital income, and government transfers.[12]

Next, after linking data on total income for children (2014-2015) and parents (1994-2000), we construct within-birth year ranks of both total child income and total parental income.[13] Finally, we divide the sample of children into two groups: those with a local-born father and those with an immigrant father (children of immigrants). In the destinations with population registers (e.g., Denmark, the Netherlands, Norway and Sweden), we directly measure a child's legal parents and their parents' countries of births. In other destinations, e.g., the US and Canada, such information is inferred from links between tax records and census data.[14] Our results look similar for samples

[9] Studying children's household income is an interesting area for future research, but is complicated due to cross-country and cross-group differences in rates of cohabitation, marriage, assortative mating, and fertility.

[10] As a result, Nybom & Stuhler (2017) find that intergenerational rank correlations in income stabilize in the early thirties.

[11] Limited tax liability may due to emigration during a calendar year or dual residency; in these case, income is likely to only be partially observed. In most destinations (e.g., Denmark, the Netherlands, Norway, Sweden), population registers ensure universal coverage in administrative data, even for individuals with zero income. In such settings, children who do not appear in the data in adulthood are either emigrants or deceased. For the US, where coverage is not universal, we follow Chetty et al. (2020) and create a balanced sample in which we assign incomes of zero to children who do not appear in the tax data.

[12] In countries where possible, e.g. Denmark, we consider the income of both legal parents independently of household composition. In countries with more limited demographic data, like the US, parental income refers to income of the primary tax filer and their (potential) spouse. Income is inflation-adjusted and excludes in-kind transfers, which are typically not recorded in administrative tax data. We follow Chetty et al. (2020) in dropping children with zero or negative parental income in order to exclude parents with large wealth (proxied by negative capital income). See their Online Appendices A & C for details. This rule drops very few parents.

[13] An alternative to assessing correlations between child and parental income ranks would be to calculate the intergenerational income elasticity by regressing the logarithm of child income on the logarithm of parental income. However, logarithmic transformations of income will exclude children with zero income, and alternative log-like transformations of income are unit sensitive (see, e.g., Chen & Roth, 2023). In addition, the intergenerational income elasticity is sensitive to within-country, across-generation changes in income inequality which is not the object of interest in the context of this paper.

[14] In most settings, we cannot observe parental visa category (e.g., refugee status) or child's citizenship status in the destination country. Similarly, race and ethnicity are typically not recorded in these administrative datasets. Abramitzky et al. (2021) show that US results are not sensitive to comparing children of immigrants to only white children of locals.

based on mothers' place of birth or both immigrant fathers and mothers (see, e.g. Abramitzky et al., 2021; Jensen & Manning, 2023). Unauthorized immigrants who are working in the informal sector will not be captured in the tax data. However, the rate of undocumented immigration was low in most of our destination countries in this period (below 5% and often below 1%), with the exception of the US and perhaps the UK.[15] Even in the US, most unauthorized parents of this cohort are likely represented in the tax data, due to the amnesty granted to undocumented immigrants under the 1986 Immigration Reform and Control Act.

With these data, we can estimate the rank-rank relationship between child and parental income in each of the 15 destination countries and examine how this relationship varies by parental immigrant status. Additional details on the data used for our main analysis are available in Appendix A. After presenting the main set of results, we perform several robustness checks to assess sensitivity to measurement. Patterns are similar when considering children born in a later cohort (1982-87) or when expanding the number of years over which we observe parental income to 1980-2000 to minimize concerns about transitory income shocks. We also consider additional child outcomes, including employment and college attendance,[16] and how additional parental characteristics, including wealth, industry, and home municipality, affect the rank-rank relationship between child and parental income.[17] From the administrative data, we can also extract destination country characteristics, such as the share of immigrant children and emigration rates, to explore how they relate to our estimated rank-rank relationships.[18]

We inevitably encounter some deviations in variable definitions and other details as we strive to harmonize data from 15 different countries. For some countries, we do not observe children born in 1978-1984, e.g. Australia (we consider cohorts born 1989-1992), Spain (we consider cohorts born 1980-1990), and the UK (we consider those born in 1970). In other countries, Austria, Israel, and Switzerland, we only observe earned income, not total income (see Table A.1 for an overview of the income data used). Further details on our data are available in Appendix A. We provide

[15] Estimates of undocumented immigration exist in five of our destination countries for the year 2001 or before, and range from 1% to 13% of the immigrant population. Any country without available estimates from this period likely had an undocumented share at or below the low levels of this range, and we further note that undocumented immigration was likely lower in the 1980s when the children we consider were born. In particular, estimates of undocumented immigration in the 1990s or early 2000s is 1% for Canada (Robinson, 1984), 3.5% for Switzerland (Arbenz, 1995), 5% for the Netherlands (Engbersen et al., 2002), 9% for the UK (Woodbridge, 2005), and 14% for the US (estimate for early 1980s) (Passel, 1986).

[16] College attendance is measured by age 25 and is only available for 7 destinations. Employment is defined as the average number of years with positive earned income between 2014 and 2015. Ideally, we could also measure vocational training and apprenticeship programs, but these vary substantially across destinations, and we do not have consistent data on them.

[17] The additional parental characteristics are measured in the first year of our parental income data (1994). These data are only available in 11 of the 15 destinations.

[18] To obtain relevant emigration rates, we consider the population of 14 year-olds born in 1978-1983 and calculate the share of emigrated children as they age. Data for this exercise are only available in 5 destinations.

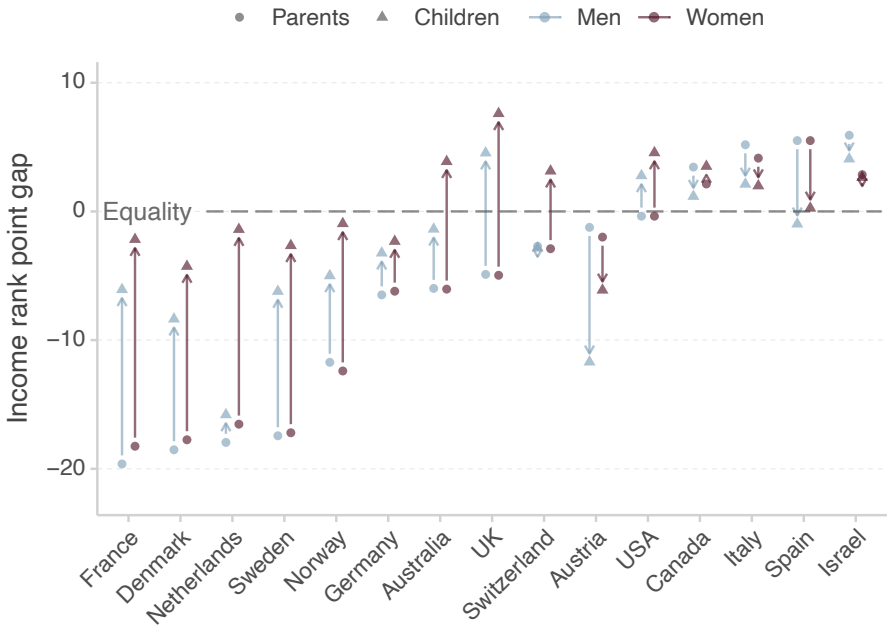
details on all country-specific deviations as well as full sets of results for each destination country in Appendix C.

4 Convergence between second-generation immigrants and children of local born

We find that, in many receiving countries, first generation immigrants (parents) earn less than the local born but the second generation (children of immigrants) close most of these income gaps.

Figure 1 reports the mean difference in income ranks between immigrants and the local born for first- and second-generation immigrants. Sons are denoted in light blue and daughters in red, with parental rank gaps marked with circles, and child rank gaps with triangles. For the ten destinations in which immigrants earn less than the local born, partial convergence toward the local born across the generations (from parent to child) is indicated with upward arrows. For the four destinations in which immigrants earn more than the local born, partial convergence is represented with downward arrows. Complete convergence between immigrants and the local born is captured by a rank gap at zero, marked with a dashed horizontal line labeled "Equality."

Figure 1: Income rank gaps between immigrants and the local-born, first generation (parents) and second generation (children)



Notes: This figure reports the mean difference in income ranks between immigrants and local-born, as well as between their children. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income is ranked within each birth cohort, in terms of percentiles of the income distribution (0-100). See Appendices A and C for details on sample construction and on the data from each country.

First-generation immigrants to ten destinations earn less than the local born, denoted with blue/red circles below zero. Gaps in this parental generation range from -20 to -2 rank points. Five of these destinations were home to immigrants who earned more than 10 rank points below the local born, including Scandinavian countries (Denmark, Norway, and Sweden) as well as France and the Netherlands. By contrast, in five destinations, immigrant parents earned at parity with or more than the local born, including Canada, Israel, Italy, Spain and the US. The positive gaps are all 6 rank points or less.

By the second generation, the children of immigrants have closed the income gaps with the children of local born in most destinations. For the ten countries with negative first generation gaps, the children of immigrants still tend to earn less than the children of local-born parents, but these gaps are much smaller than in the parental generation, resulting in substantial convergence. The gaps between children of immigrants and the local born in these 10 countries range from -9 to +5 rank points for sons and -4 to +7 rank points for daughters (with sons in the Netherlands being an outlier at -15 rank points). Austria is the only counterexample to this convergence pattern, where minor gaps for first-generation immigrants (1-2 points) grow to -6 to -12 rank points for both the daughters and sons of immigrants. For the four countries with positive first generation gaps, the children of immigrants continue to out-earn the children of the local born, but they partially converge downward toward equality. In the US, immigrants earned at parity with locals and their children gain, with income 2-4 points higher than the children of the local born. Figure B.23 presents income gaps from cross-sectional data for first- and second-generation immigrants by destination. Patterns are generally similar. We describe these results in more detail in Section 7.3.[19]

Although all children of immigrants typically experience partial convergence relative to the children of the local born, daughters of immigrants achieve substantially more convergence than sons. For most countries, daughters of immigrants' income (red triangles) are closer to equality with the local born relative to the comparable gap for sons of immigrants (blue triangles). For destinations that start out with negative first generation gaps, daughters of immigrants experience 5-10 additional rank points of progress relative to the sons of immigrants in almost every case.

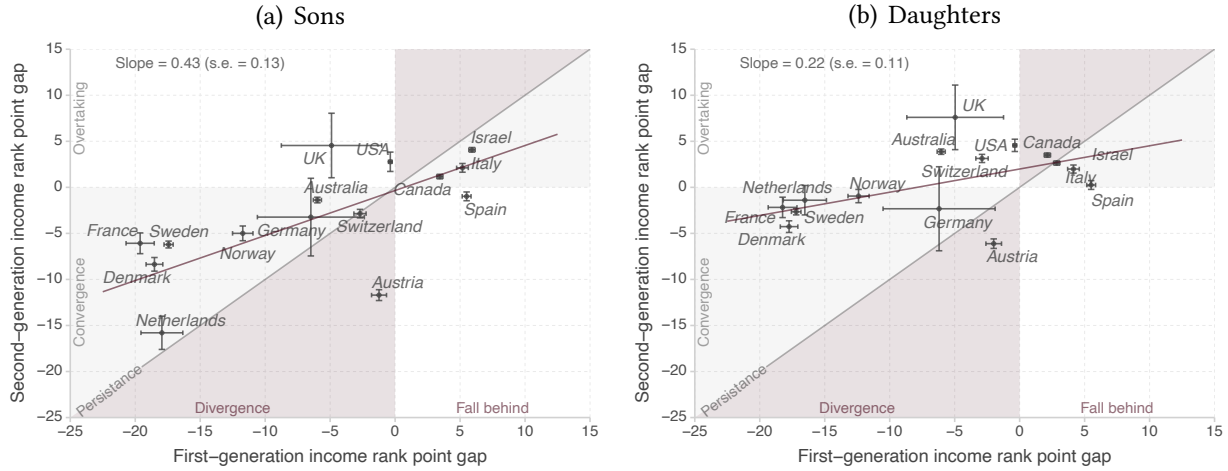
Figure 2 reorganizes this information, graphing the relationship between the first-generation and second-generation income gaps by destination country. This visualization emphasizes that the persistence of income rank gaps (slope of 0.43) among sons of immigrants is twice as strong as among daughters of immigrants (slope of 0.22). In countries with an income gap of 10 rank points

[19] We note that the selection of immigrant households into the German Socio-Economic Panel is more positive than in the full cross-section (compare the 13 rank point gap between immigrant and local-born parents in Figure B.23 to the 7 rank point gap in Figure 2).

in the parental generation, sons are expected to have a gap of 4 rank points, whereas daughters are expected to have a rank gap of just 2 points.

This figure also offers another way to visualize convergence between the first and second generation. We mark the 45-degree line, which represents complete persistence, in gray. For countries with negative first-generation income gaps, any point above the 45-degree line is in the "convergence zone" (shaded in gray); for countries with positive first-generation gaps, any point below the 45-degree line represents convergence. All countries (except Austria and sons in Spain) fall into the convergence zone or even experience some overtaking (US and UK). For daughters, a few countries face very mild divergence (Canada, Israel).

Figure 2: Comparing income rank gaps in first- and second-generation across countries



Notes: This figure reports the mean difference in income ranks between immigrants and local-born, as well as between their children. We mark the 45-degree line, which represents complete persistence, in gray, and draw the estimated regression line in red. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated; these are particularly large for German and UK results based on survey rather than administrative data.

5 Decomposing remaining gaps between second-generation immigrants and children of locals

Despite substantial convergence in the second generation, children of immigrants experience a remaining income gap with the children of local-born parents in many countries. Mechanically, this gap can be driven by (a) differences in the income of immigrant parents and local-born parents, or (b) differences in the mobility parameters relating income across generations. We start by providing descriptive evidence on each of these channels and then more formally decompose the income gaps between the children of immigrants and the local born.

5.1 Gaps in parental income

For some of the countries in our sample, immigrant households not only have lower mean income ranks, but are also concentrated at the very bottom of the income distribution. Figure 3 presents the share of daughters of immigrants growing up in each ventile of the national income distribution (patterns for sons are practically identical, see Appendix C). Note that the children of local-born parents (not shown) are roughly balanced across ventiles, with around 5% of children of local-born parents in each ventile.[20]

Figure 3, Panel (a), shows the share of immigrant daughters across ventiles in the six countries where children of immigrants are concentrated in low-income families: Australia, Denmark, France, the Netherlands, Norway, and Sweden. For example, in Denmark, nearly 50% of the daughters of immigrants were raised by parents in the bottom 20% of the income distribution, compared to (mechanically) around 20% of the daughters of the local born.

In contrast, in nine destinations, children of immigrants are more evenly spread in families throughout the income distribution. These destinations include three non-European countries (Canada, Israel, and US) and six European countries (Austria, Germany, Italy, Spain, Switzerland, and UK).

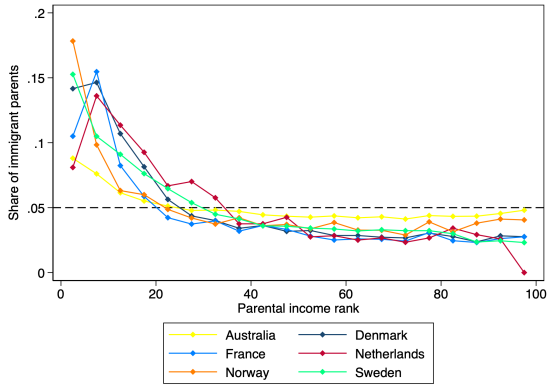
Some of the differences in parental income distribution across destinations may be explained by immigration policy. Immigration into France, the Netherlands and Sweden was influenced by colonial or administrative history, leading to distinctive patterns of parental country of origin. For example, the largest immigrant group in France hailed from Algeria, the Netherlands absorbed many immigrants from Surinam and Indonesia, and nearly a quarter of immigrants in Sweden were from Finland.[21] Australia began dismantling the White Australia policy in 1949, opening up to broader European immigration following World War II. The implementation of a non-discriminatory policy in 1973 was followed by increased migration from Asia and the Middle East. A points-based system was introduced over the course of the late 1970s and 1980s (Miller, 1999; Jupp, 2002). The cohorts in our study were born to parents who may have arrived before the new system was formalized into law in 1989. Denmark and Norway did not have notable immigration policies at the time, but their generous social welfare may have encouraged the entry of poorer households (Agersnap et al., 2020).

[20] Figure B.2 includes separate distributions for all our destination countries.

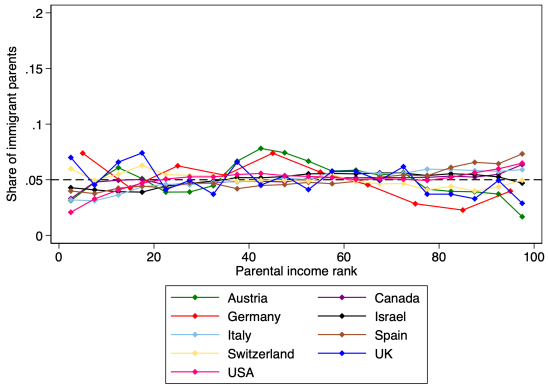
[21] We report the five largest sending countries represented in the stock of immigrants living in each destination in 2000 and 2011 (Tables B.1 and B.2).

Figure 3: Share of daughters with immigrant parents by parental income ventile

(a) Over-representation in lower ventiles



(b) Near equally distributed



Notes: This figure shows the share of daughters with immigrant parents in each ventile out of the total number of daughters with immigrant parents (across all ventiles). The black dashed line corresponds to an equal distribution across ventiles. By construction, children of the local-born population are close to this uniform distribution. For Germany, for which we rely on survey data, we present decile shares divided by two to maintain a common scale while reducing noise in the shares. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Parental income is measured in 1994-2000. Income ranks, 0-100, are determined within child cohorts. See Appendices A and C for details on sample construction, details on data from each country, and parental income distributions for both daughters and sons; patterns for sons are practically identical. Figure B.2 includes the same distributions mapped separately by destination.

5.2 Differences in mobility parameters

Immigrant households may exhibit a different set of mobility parameters relating parental income to child outcomes. In particular, children of immigrants may experience consistently greater/lesser upward mobility at the bottom of the income distribution (henceforth, *absolute mobility*) or greater/lesser correlation with the income of their parents (henceforth, *relative mobility*).

Absolute and relative mobility can be inferred from the rank-rank relationship between parental and child income. Figure 4 graphs child income rank against parental income rank separately by ventile for children of immigrants (gray diamonds) and children of local born (black circles) and for sons and daughters. In particular, following Chetty et al. (2020) and Abramitzky et al. (2021), we estimate:

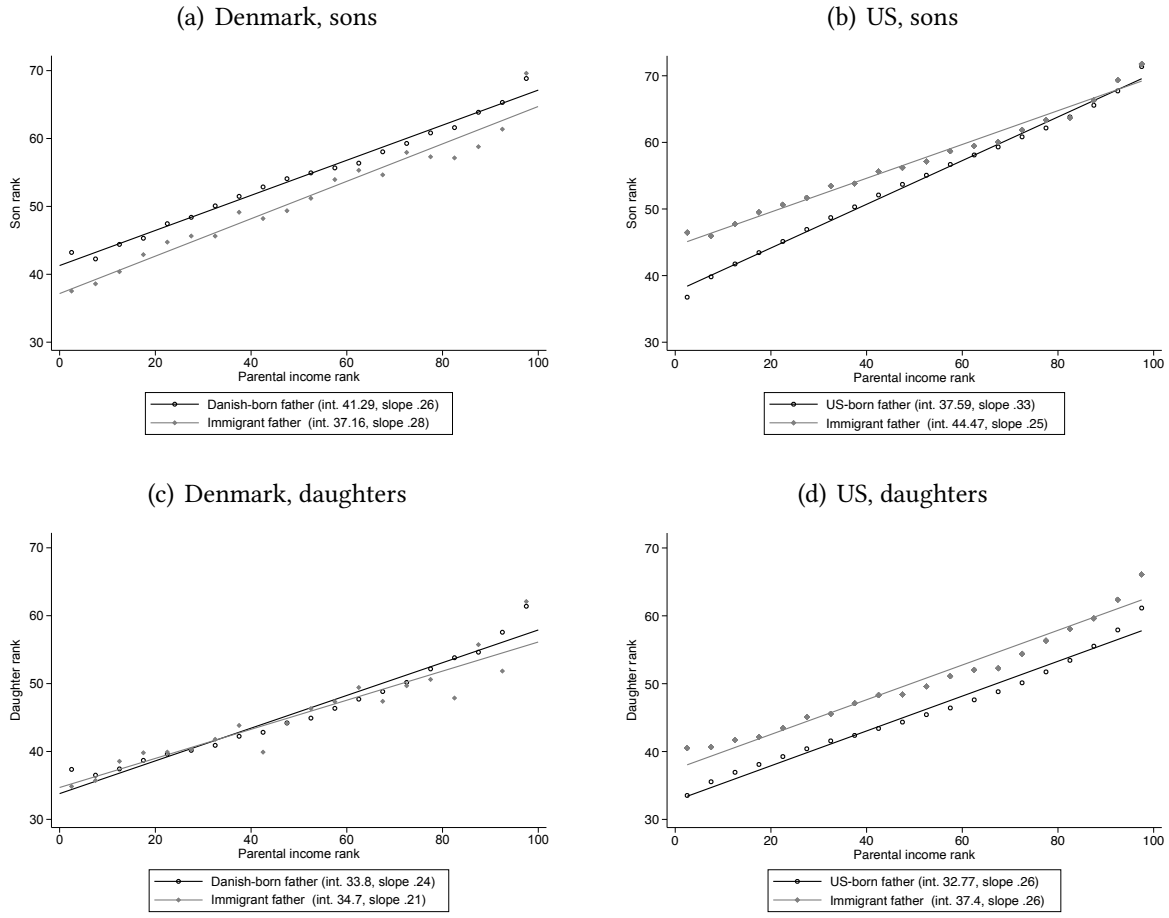
$$y_{i,c} = \alpha + \beta_p y_{i,p} + \beta_m \text{migrant}_i + \beta_{mp} y_{i,p} \cdot \text{migrant}_i + \varepsilon_i \tag{1}$$

where $y_{i,c}$ is the adult child's income rank, $y_{i,p}$ is the parental income rank, and migrant_i is an indicator for having an immigrant father. α yields an estimate of absolute mobility and β_p of relative mobility for children of the local born. When comparing children of immigrants and children of locals, higher absolute mobility (β_m) is represented as a shift up of the intercept in the rank-rank relationship for the children of immigrants, indicating that children of immigrants have a higher

income than children of locals when both have parents at the bottom of the parental income distribution. Higher relative mobility is instead represented as a flattening of the slope relating parental income to child income (that is, a negative β_{mp}), suggesting that children's outcomes are less strongly influenced by parental background.

We provide examples of this process for two destination countries – Denmark and the United States – in Figure 4 and then summarize these patterns across all destinations in Figure 5.

Figure 4: Intergenerational mobility, Denmark vs. US

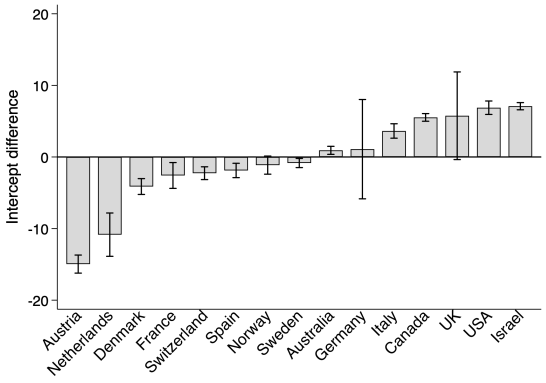


Notes: This figure plots estimates of Specification 1 for Denmark and the US. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within child birth cohorts. See Appendices A and C for details on sample construction and on the data from each country. See Figures B.3 and B.4 for similar figures for all destination countries.

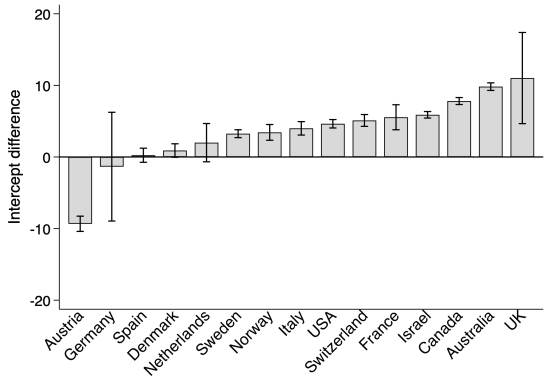
In Figure 4, we document notably different patterns for the children of immigrants in Denmark and the US. In Denmark, the sons of immigrants appear to have lower levels of absolute mobility, represented here by a parallel shift down in the relationship between parental and child income. Lower levels of absolute mobility suggest some form of barrier or obstacle faced by all sons of

Figure 5: Differences in intergenerational mobility between children of immigrants and children of locals

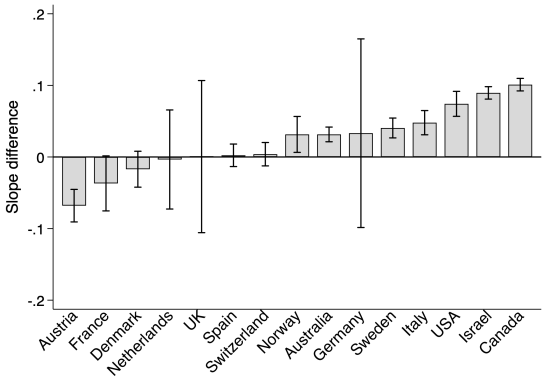
(a) Absolute mobility, sons (higher for immigrants = above zero)



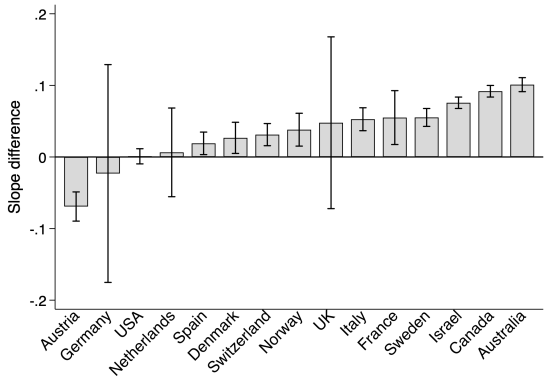
(b) Absolute mobility, daughters (higher for immigrants = above zero)



(c) Relative mobility, sons (higher for immigrants = above zero)



(d) Relative mobility, daughters (higher for immigrants = above zero)



Notes: This figure plots estimates of β_m (absolute mobility difference) and $-\beta_{mp}$ (relative mobility difference) from Specification 1 for each destination country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

immigrants regardless of their parents' place in the national income distribution. The daughters of immigrants in Denmark instead exhibit a mobility pattern that looks indistinguishable from the daughters of the local born, both in absolute and relative terms.

In the US, by contrast, both sons and daughters of immigrants enjoy higher levels of absolute mobility, illustrated by a parallel shift up for daughters and a higher intercept (but a flatter slope) for sons. Children of immigrants raised in the lowest ventile enjoy a 7-9 rank point advantage relative to children of the US-born in the lowest ventile. For sons of immigrants, this advantage dissipates for men raised at higher ventiles of the distribution due to a higher level of relative

mobility (flatter slope). Daughters of immigrants instead maintain this advantage throughout the distribution.

Rather than inspecting similar relationships for all destination countries one-by-one, we instead summarize these patterns in Figure 5 using two parameters: the intercept differences between children of immigrants and locals (absolute mobility, β_m), and the slope differences between children of immigrants and children of local born (relative mobility, $-\beta_{mp}$).

In historically immigrant-receiving destinations (Australia, Canada, Israel, UK and US), both the sons and the daughters of immigrants have higher levels of absolute mobility than the children of local-born parents. By contrast, in eight continental European destinations, the sons of immigrants exhibit *lower* absolute mobility than the sons of the local born, but daughters of immigrants exhibit *higher* levels of absolute mobility than the daughters of the local born. The two exceptions to this pattern are Austria (where both sons and daughters of immigrants experience lower absolute mobility) and Germany (where the children of immigrants are not statistically different from the children of locals). Otherwise, gaps in absolute mobility are large and economically meaningful in most cases, representing a difference of 3 or more rank points.

Although the children of immigrants have higher levels of relative mobility than the children of the local born in most destinations, these differences are typically small. The largest differences in relative mobility occur in destination countries with lower relative mobility for the children of locals (Canada, Israel, US for sons, Australia for daughters). In these destinations, the slope of the rank-rank relationship is 0.1 smaller for the children of immigrants, representing 1 rank point in children's income for every 10 rank points of parents. As a result, in these countries, the high rates of absolute mobility are offset by the high rates of relative mobility at higher points in the income distribution, leading the children of higher-income immigrants to have outcomes no different from the children of higher-income local parents.

So far, our analysis compares the outcomes across two generations: children born circa 1980 and their parents. However, we may also be interested in potential income rank gaps in the long run as they evolve over multiple generations. Chetty et al. (2020) apply a framework to determine the steady-state levels to which income ranks gaps will converge over many generations. This framework assumes fixed and persistent population categories, which may be reasonable in the case of race but less so in immigrant communities. However, we present these results in Figure B.8 to compare with current income gaps in Figure 5. Income gaps are close to steady state in most cases.[22]

In Figure 5, we consider the absolute and relative mobility parameters separately. Alterna-

[22]Results suggest that income gaps will change in steady state for a few countries, with the negative income gaps currently observed in France closing and the parental income advantage (or small disadvantage) apparent in Spain and Austria reversing or becoming more negative.

tively, we could follow the approach taken by papers that combine absolute and relative mobility to calculate predicted child income ranks at the 25th/50th/75th percentiles of the parental income distribution (Abramitzky et al., 2021). We report these values in Appendix Figure B.5. The cross-country ranking of mobility gaps between children of immigrants and locals are qualitatively similar to the absolute mobility gaps presented in Figure 5 when measured at these percentiles, with the exception of gaps at the 75th percentile in some of the historically immigrant-receiving destinations (Canada, Israel, etc.). In these cases, children of immigrants have higher expected ranks than children of the local born at the 25th percentile but lose this advantage at the 75th percentile.

5.3 Full decomposition of income gaps between children of immigrants and local born

The descriptive patterns suggest that the children of immigrants tend to differ from the children of local-born parents in two economically meaningful ways: (a) they are raised in lower-income households, and (b) they exhibit different rates of absolute mobility (higher for daughters and lower for sons). Figure 6 illustrates the role of these forces in explaining the income gap between children of immigrants and children of locals for each destination country. We include a full Oaxaca-Blinder decomposition of this gap for each country in Appendix C.[23]

In Figure 6, we depict the unconditional income gap between children of immigrants and children of the local born with dark gray bars (as in Figure 1). The light gray bars then depict the income gap conditional on parental income, or the *counterfactual gap* between the two groups if the children of immigrants were raised in families with the same average income as the children of the local born. In Figure 6, we plot only the total rank gap and the "unexplained" gap directly; the "explained" gap due to parental income can be inferred from the difference between the dark and light gray bars.

For both sons and daughters (panels (a) and (b) respectively), accounting for differences in childhood household income can explain a substantial portion of the unconditional income gaps between children of immigrants and the local born. For daughters, differences in parental income account for the *entire* income gap for destinations with negative income gaps (with the exception of Austria). Not only are income gaps closed in this counterfactual, but the daughters of

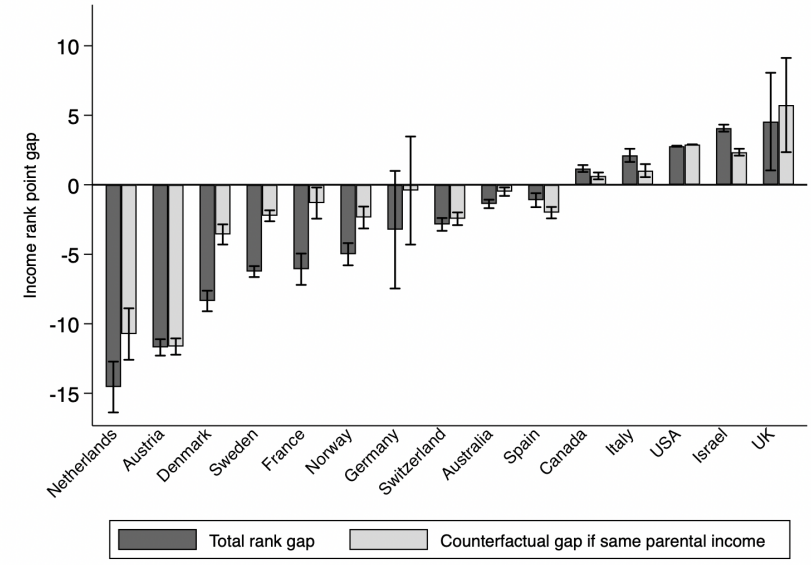
[23]The Oaxaca-Blinder decomposition of the difference in mean income rank between children of immigrants and children of locals, using children of locals as the reference group, is given by:

$$\underbrace{\bar{y}_{mc} - \bar{y}_c}_{\text{A: Total gap}} = \underbrace{\hat{\beta}_m + \hat{\beta}_{mp}\bar{y}_{mp}}_{\text{B: Unexplained gap}} + \underbrace{(\bar{y}_{mp} - \bar{y}_p)\hat{\beta}_p}_{\text{C: Explained gap}} \tag{2}$$

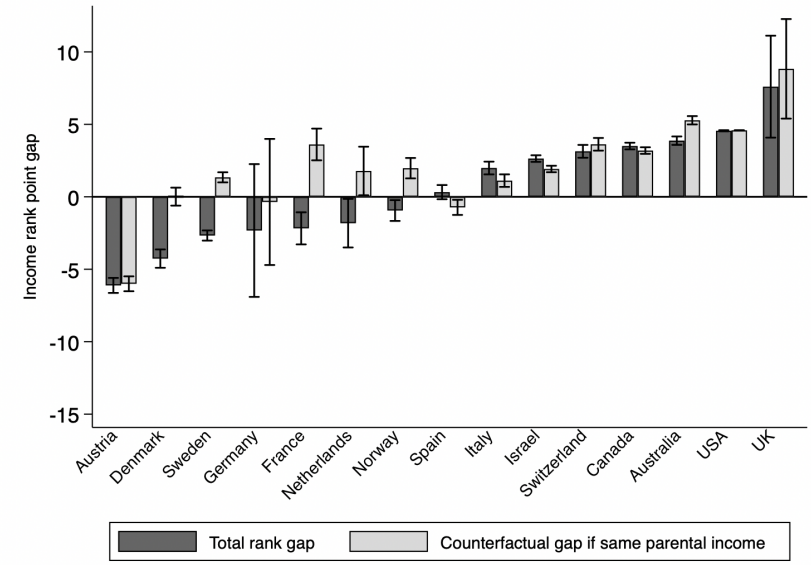
where $\bar{y}_{mc}$ and $\bar{y}_c$ are the mean income ranks of children of immigrants and children of locals, respectively. $\bar{y}_{mp}$ and $\bar{y}_p$ are the mean income ranks for their parents. $\hat{\beta}_m$, $\hat{\beta}_{mp}$, and $\hat{\beta}_p$ are the estimated coefficients from Specification 1. We follow the terminology of Fortin et al. (2011) and refer to terms B and C as the "unexplained" and "explained" gaps, respectively.

Figure 6: Oaxaca-Blinder decompositions of differences in child income ranks

(a) Sons



(b) Daughters



Notes: This figure plots results from a Oaxaca-Blinder decomposition of the difference in mean income rank between children of immigrants and children of local born, using children of local born as the reference group. Specifically, the dark gray bars plot the difference in mean income ranks between the children of immigrants and children of local born (term A in Equation 2). The light gray bars plot the gap in income that cannot be explained by parental income differences (term B in Equation 2, which is equivalent to term A minus term C). Appendix C contain decomposition results using alternative reference groups for each destination country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within child birth cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

immigrants *earn more* than the daughters of local-born parents conditional on having the same parental income levels in most destinations. In contrast, for sons, sizable (but smaller) negative gaps remain in most cases. Appendix Figure B.6 reports the share of the overall income gaps that can be explained by differences in parental income by destination country and gender. For daughters, parental income can explain 97% of the income gap (range = -36% to 333%). For sons, parental income can explain 32% of the income gap (range = -81% to 87%).

We further decompose these "unexplained" gaps in a detailed Oaxaca-Blinder decomposition in Figure B.7.[24] The detailed decomposition reveals that the higher income of daughters of immigrants conditional on parental income are driven by higher rates of absolute mobility (light gray bars, panel b); the lower income of sons of immigrants are likewise driven by lower rates of absolute mobility (light gray bars, panel a). The "unexplained" components due to differences in relative mobility (dark gray bars) are either negative or not significantly different from zero. In general, relative mobility plays only a minor role, both because the estimates of β_{mp} (differences in relative mobility) tend to be small (see Figure 5), but also because the average income ranks of immigrant parents are relatively low in many destination countries ($\bar{y}_{mp}$). We find three exceptions: Canada, Israel and Italy (along with Australia for daughters and the US for sons) where the "unexplained" components due to differences in relative mobility are larger and negative, but they are all dominated by even larger and positive differences due to absolute mobility.

5.4 Reference country parameters

Children of immigrants earn less than the children of the local born in many European destinations but have reached parity with the children of the local born in the US. We use our decomposition to consider how these income gaps would change under two scenarios: (a) if children of immigrants in each destination were raised in households drawn from the same income rank distribution as the children of immigrants in the US and (b) if children of local born and children of immigrants in each destination experienced the same absolute and relative mobility parameters as children in the US.

Figure 7 documents that the varying performance of children of immigrants in the US and in other destinations is due both to initial differences in parental income and to differences in mobility parameters across locations. For reference, we graph the actual gap in mean income ranks between children of immigrants and children of locals in each destination in dark gray bars and compare these gaps to the 3 rank point advantage for children of immigrants in the US (the dotted horizontal line). The light gray bars illustrate what the mean income gaps would be in

[24] Note that detailed decompositions are sensitive to the choice of reference group and scaling of independent variables (Oaxaca & Ransom, 1999). In our case, the small differences in the slope parameter (relative mobility) limit this issue, and we reach similar conclusions in Section 5.4.

each destination *if* children of immigrants were raised at the same parental income ranks as in the US. These counterfactual gaps tend to be less negative overall (and often positive for daughters), reflecting the fact that immigrant parents are located higher up in the income distribution in the US than in many European destinations (Spain, Switzerland, and the UK are counterexamples because the income distribution of immigrant households is similar in these countries to that of the US). Finally, the white bars use the estimated mobility parameters from the US ($\hat{\alpha}$, $\hat{\beta}_p$, $\hat{\beta}_m$, and $\hat{\beta}_{mp}$) to predict child income rank gaps in a given country (using that country's actual parental income ranks). Again, we find that these counterfactual gaps tend to be less negative for sons and positive for daughters, highlighting that mobility parameters in the US are also relatively more favorable for children of immigrants compared to other countries (the only exception is the UK; Australia and Switzerland are also similarly favorable to the daughters of immigrants).

6 Mechanisms

Thus far, we have documented substantial variation in the income rank gap between the children of immigrants and local-born parents across destination countries and by gender, with daughters out-performing sons. Although a large share of the income gap between children of immigrants and the local born can be traced back to differences in parental income ranks, a portion of these gaps remains unexplained and is driven primarily by differences in absolute mobility.

In this section, we explore potential mechanisms behind the differences in absolute mobility, both across countries and between the sons and daughters of immigrants.[25] We divide possible mechanisms into two categories: differences in parental attributes (beyond parental income), including parental country of origin, and differences in destination country characteristics. We find that differences in income gaps across countries cannot be explained by parental attributes alone and so destination country characteristics are likely playing a role.

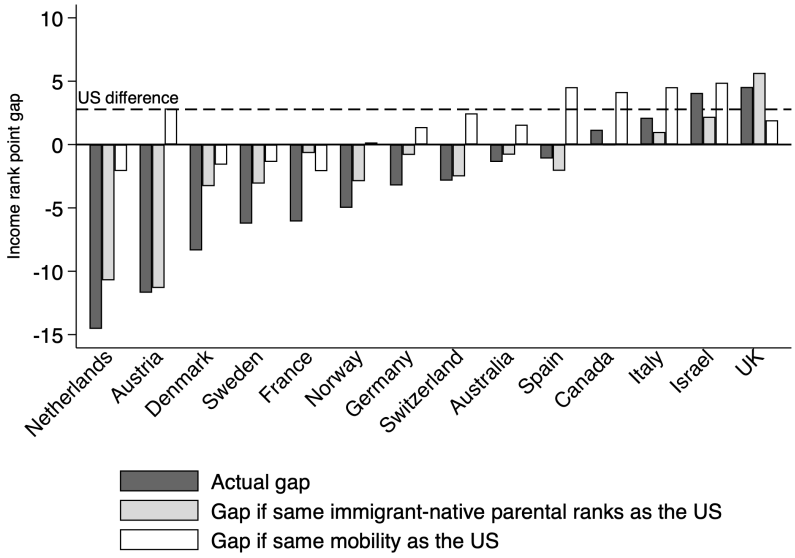
Additional parental characteristics: Household income may not be a comprehensive measure of resources available in childhood, particularly in immigrant households. A large literature documents that immigrants are positively selected on the basis of education or on pre-migration earnings.[26] We have information on parental wealth, residential location, and industry of employ-

[25] Similar results considering the mechanisms behind differences in relative mobility are included in Appendix B.3.

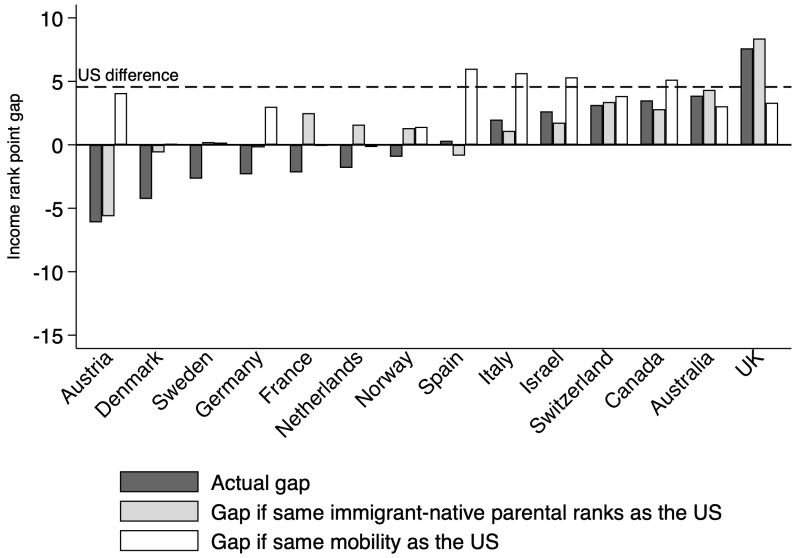
[26] See (Feliciano, 2005) on immigrants to the US and Grogger & Hanson (2011) on immigrants from nearly every sending country. Borjas et al. (2019) document that emigrants from Denmark to other countries (mostly in the EU) are positively selected on the basis of pre-migration earnings, and Clemens & Mendola (2024) extend this pattern to emigrants from most developing countries, particularly those who settle in high-income destinations.

Figure 7: US reference parameters

(a) Sons



(b) Daughters



Notes: This figure plots two counterfactual gaps in mean income ranks between children of immigrants and children of locals. Specifically, the dark gray bars plot actual gaps in mean income ranks (term A from Equation 2). The light gray bars plot mean income rank gaps between children of immigrants and children of locals *if* parental income ranks had been the same as children of immigrants in the US. The white bars return to the actual parental income ranks for each destination country, but use estimated mobility parameters from the US ($\hat{\alpha}$, $\hat{\beta}_p$, $\hat{\beta}_m$, and $\hat{\beta}_{mp}$) to predict child income rank gaps. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

ment for some destination countries.[27] Conditional on having similar income ranks, immigrant parents may still have fewer assets, live in less affluent areas, or work in industries that provide fewer opportunities for upward mobility for their children; these are all factors that could negatively affect child outcomes independently of parental immigration status (see, e.g., McLoyd, 1998). To examine the role of such potential differences, we return to Specification 1 and add parental municipality fixed effects, industry fixed effects, and wealth ventile fixed effects for as many destination countries that report these measures.[28]

Results with various sets of controls are included in Figure 8. We have data to include additional controls in 11 destination countries for sons and daughters. In only six of these 22 cases do additional controls partially or fully explain the remaining income gaps for children of immigrants. For example, geographic controls do not matter in most country-gender pairs (in contrast to historical evidence in Abramitzky et al., 2021), perhaps because immigrants are not fully free to select their location in some European countries, or because regions are more homogeneous in smaller European destinations. As one counter-example, adding municipality fixed effects can explain around half of absolute mobility advantage for children of immigrants in Italy, consistent with the fact that immigrants to Italy are more likely to settle in the prosperous and economically mobile North of the country (as of 2011, 10% of the population was foreign born in northern regions, compared to 3% in southern regions; see Caritas e Migrantes, 2020).[29] We conclude that additional parental attributes beyond income are important in explaining second-generation income gaps in some cases, but cross-country variation in the outcomes of the second generation remains.

We do not have data on some potentially important parental attributes, including education, language skills and neighborhoods. Attributes like parental education could aid upward mobility if immigrant parents earn less than their education level would imply, but they are able to transmit educational advantages to their children. On the other hand, parents transmit race and ethnic identity to their children, which can lower upward mobility. Measured income and resources may also differ between immigrant and local-born parents. If immigrants are more likely to work "under the table," immigrants may earn more than they report to the tax authorities, thereby aiding their children. On the other hand, immigrant parents may send a portion of their earnings

[27] Note that the education of immigrants tend to be poorly observed in administrative data as the education of immigrants often takes place before migration.

[28] All additional parental controls are added as FEs and are measured in 1994, the first years in which we observe parental income. Parental industry FEs are included separately for each of the two parents and include categories for unknown industry as well as no industry (if not working). The level of detail of industries considered vary depending on data availability, typically ranging between 27 and 100 FEs. Parental wealth FEs are included as ventiles of the sum of parental wealth, determined within cohorts. Parental municipality FEs are typically collinear, so we focus on paternal municipality FEs.

[29] We do not have consistent cross-country data on parental neighborhood of residence and so we are not able to control for residence in an immigrant enclave.

back to their home country as remittances, lowering available resources to support children at home for any given measured level of income (Yang, 2011).

In theory, any of these sources of immigrant advantage or disadvantage would apply equally to the sons and daughters of immigrants. However, Bertrand & Pan (2013) and Autor et al. (2019) show that, in various settings, boys are more affected by living in a challenging childhood environment than are girls (e.g., in an environment with discrimination or anti-immigrant sentiment). Furthermore, teachers or employers could treat the sons of immigrants differently than the daughters of immigrants if they perceive "ethnic" boys or men as more of a threat than "ethnic" girls or women (Navarrete et al., 2010; Edo et al., 2019; Ward, 2019; Gereke et al., 2020).[30] Immigrant parenting practices may also differ between sons and daughters (Foner & Dreby, 2011; Rumbaut, 2005). If immigrant parents are more protective of daughters, this parental oversight may hold daughters back from achievement but may also shield daughters from dangerous neighborhood environments (Dahl et al., 2022 for Muslim daughters in Germany; Waters, 2001 for West Indians in the US; see also Giuliani et al., 2017).

Country of origin differences: Another important difference in parental attributes across destinations is the composition of sending countries in the immigrant population. In Appendix Figure B.1, we show that top sending countries vary substantially across destination countries. For example, in the US the largest group of immigrants is from Latin America (Mexico, Central America, and South America), whereas in most European countries the largest group of immigrants is from other European countries, with other large clusters from North Africa or the Middle East (Morocco, Turkey, etc.).[31]

Immigrants from different sending countries have systematically different income levels in the first generation. Even after controlling for parental income, sending country composition may still explain differences in absolute mobility for the children of immigrants. We explore this potential mechanism in three ways. Together, the patterns presented here suggest that parental sending country cannot explain cross-country differences in absolute mobility, suggesting that destination country effects likely play a role.

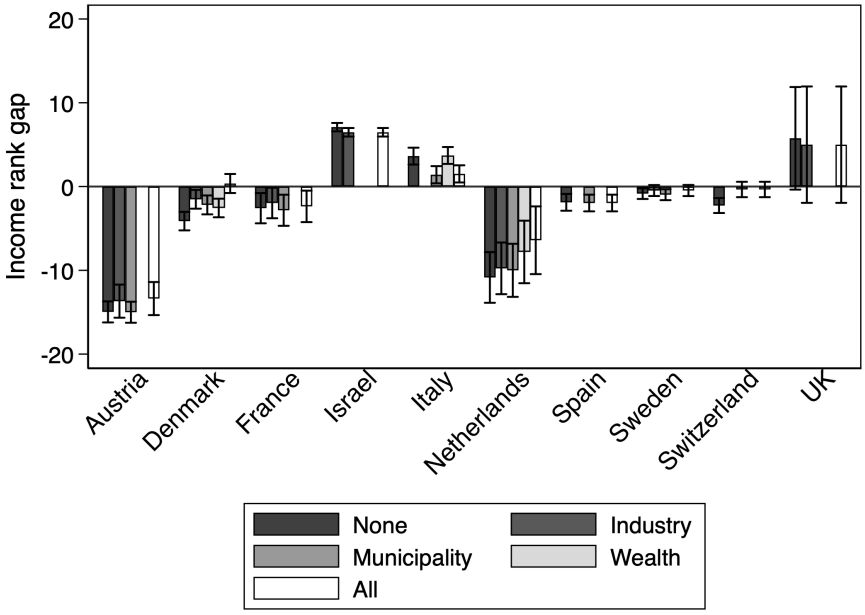
In our first exercise, we regress the difference in absolute mobility between the children of immigrants in a destination-sending country pair and the children of local-born parents in the destination on destination and sending country fixed effects:

[30] This possibility is in line with the findings of a larger black-white wage differentials for men than women in the US among the US-born Neal (2004).

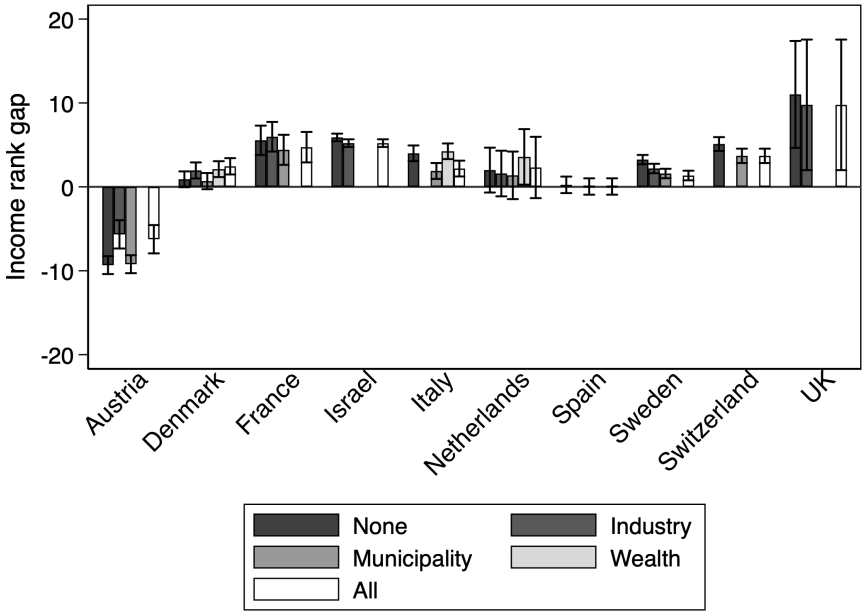
[31] We report the five largest sending countries in the stock of immigrants living in each destination in 2000 and 2011 (Tables B.1 and B.2). The list of top sending countries is very stable over time and so likely well represents the birthplaces of the immigrant parents in our sample.

Figure 8: Intergenerational mobility after accounting for other parental characteristics beyond income

(a) Absolute mobility, sons



(b) Absolute mobility, daughters



Notes: This figure plots estimates of β_m (absolute mobility difference) from Specification 1 for each destination country. We add parental municipality, industry, and ventile wealth fixed effects as controls. "All" refers to a specification that includes all of these controls that are available for the specific destination country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

$$\hat{\beta}_{m,ds} = \theta_0 + \sum_{i=2}^{D} \theta_1^i destination_d^i + \sum_{j=2}^{S} \theta_2^j sending_s^j + \epsilon_{ds} \quad (3)$$

where $\hat{\beta}_{m,ds}$ is the previously estimated difference in absolute mobility between the children of immigrants from sending country s and the children of local-born parents in destination d. $destination_d^i$ is an indicator equal to 1 if destination country i is country d. $sending_s^j$ is an indicator equal to 1 if parental sending country j is country s. D total number of destination countries (for this exercise, we have data on 11), S is the total number of parental sending countries (we have data on 78). $destination^1$ is Denmark and is the reference destination, $sending^1$ is Turkey and is the reference sending country. θ_1 and θ_2 give the parameters of interest and are sets of destination and sending country-specific effects respectively.

Figure 9 presents destination country fixed effects for sons and for daughters (panels a and b). Black diamonds report destination country effects estimated alone (that is, dropping the third term in Equation 3), and gray diamonds report coefficients on destination country effects after controlling for sending country effects as well. Black and gray diamonds are nearly identical, suggesting that differences across destination countries in absolute mobility are not driven by sending country composition. For example, the Netherlands and Austria remain low mobility countries for the sons of immigrants and Israel and Canada remain high mobility countries.

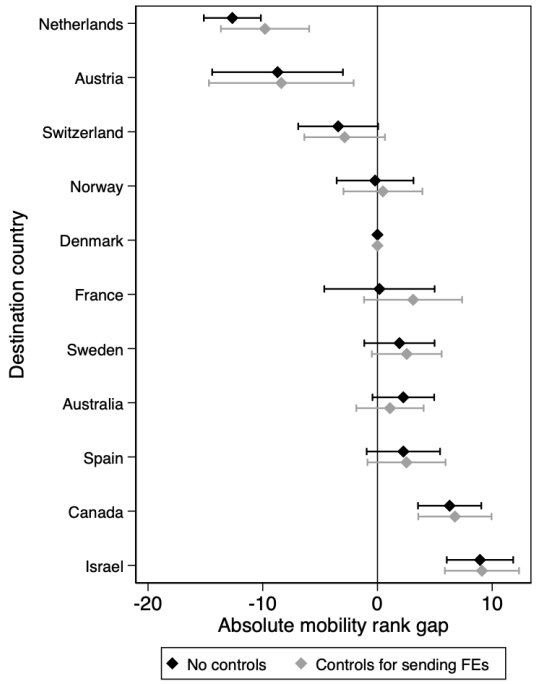
Appendix Figure B.10 shows the corresponding sets of coefficients on sending country fixed effects. Sending countries differ in their rates of absolute mobility (although these differences are often not statistically different from each other). Daughters of immigrants from nearly every sending country, with the possible exception of Congo, Ethiopia, Paraguay and Nigeria, have higher absolute mobility than the daughters of local born parents; daughters of immigrants from Asian countries (e.g., China, Malaysia, Vietnam) have the highest rates of upward mobility. Sending countries with the highest and lowest mobility for the sons of immigrants are more mixed, including some Latin American countries (Guatamala low, Colombia high), some African countries (Gambia low, Libya high) and some Asian countries (Philippines low, Indonesia high).

For our second exercise, we document differences in absolute mobility for each sending country by destination. We start in Appendix Figure B.11 by plotting the variation in absolute mobility gaps for *every* sending country for as many destinations as observed in the data, and then we turn in Figure 10 to five sending countries that we observe in up to nine destinations. The red circles in Appendix Figure B.11 represent the median level of absolute mobility for each sending country and the black diamonds illustrate absolute mobility for these sending countries in different destinations. In most cases, the black diamonds demonstrate substantial variation around the median, often with up to 10 rank points difference in each direction.

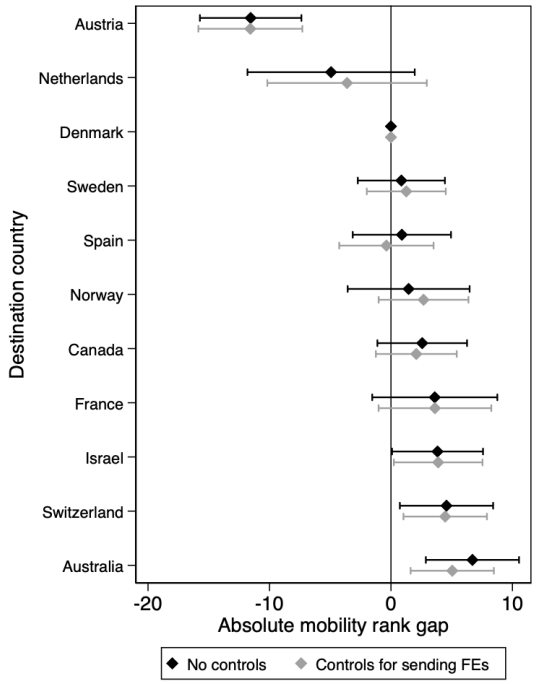
We plot the sending-country specific parameters for the five sending countries that we can

Figure 9: Destination country effects are not explained by sending country composition

(a) Absolute mobility gaps, sons



(b) Absolute mobility gaps, daughters



Notes: This figure plots estimates of Equation 3, i.e. we regress the difference in absolute mobility between the children of immigrants from a particular sending country in a given destination and the children of local-born parents in that destination on destination country and sending country fixed effects. Black diamonds report destination country effects estimated alone (that is, dropping the third term in Equation 3), and gray diamonds report coefficients on destination country effects after controlling for sending country effects as well. To obtain the differences needed for this regression, we first replace the migrant-parent dummy and interaction term with a sending country-specific dummy and interaction term when estimating Specification 1. We drop absolute mobility differences that are particularly imprecisely estimated (standard error > 10), leaving 267 and 265 destination-sending country pairs for sons and daughters, respectively. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

observe in a large number of destinations (Turkey, Morocco, former Yugoslavia, Italy and Germany) in Figure 10.[32] Each panel refers to one sending country, and the bars of each panel refer to the gap in absolute mobility between children of parents from this specific sending country compared to children of locals in the destination country indicated on the x-axis (e.g., Austria, the Netherlands, etc.). For comparison, we also include crosses on each bar to indicate mean gaps in absolute mobility between children of locals and children of all immigrants in the relevant destination country. In general, we find that living in destinations with larger gaps overall (as indicated by crosses) is also associated with larger gaps for specific sending countries. For example, Austria and the Netherlands have the largest negative gaps for the sons of immigrants overall, and also the largest gaps for sons of immigrants from Turkey, Morocco, former Yugoslavia, Italy and Germany. Likewise, absolute mobility gaps are positive overall for the sons of immigrants in Canada and this pattern holds for all specific sending countries as well.

We emphasize that some of these patterns could be driven by differential selection into destination countries. For example, Canada has been operating on a "point system," offering more entry slots to immigrants with higher education, whereas destinations like Austria and Germany ran guest worker programs for low-skilled immigrants through the 1970s. However, we find differences by destination country even *within* continental Europe, and even for sending countries like Germany whose emigrants did not participate in guest worker programs.

Furthermore, we emphasize that immigration policy can select for parental income, but it is harder to select for the potential for upward mobility *conditional* on parental income and, indeed, points systems are often criticized for selection on observable credentials, rather than underlying ability. It is unlikely that selection on the basis of parental income explains variation in absolute mobility because we find no association between gaps in parental income rank and in children's absolute mobility. Appendix Figure B.13 graphs the relationship between the parental income rank gap and the children's absolute mobility gap for the sending country-by-destination pairs in Figure 10. The color of each marker reflects the sending country and the shape of the marker reflects the destination. For sons (panel a), we observe lower levels of absolute mobility for almost every sending country-by-destination pair, regardless of whether their parents were low income (10th percentile) or high income (50th percentile). For daughters (panel b), we observe high absolute mobility for almost every pair (with the exception of low absolute mobility in Austria), again invariant to the parental income gap.

In our third exercise, we measure the dispersion in absolute mobility across parental sending countries for each destination. Figure B.14 graphs the mean, median, and inter-quartile range

[32]Note that the treatment of former Yugoslavia as parental country of birth may vary slightly across contexts as some destination countries' administrative records will have been updated to reflect the more recent division of countries. See Appendices A and C for details on sample construction and on the data from each country.

of absolute mobility gaps within each destination country. Despite some dispersion in absolute mobility across sending countries within a destination, the full distribution of sending countries in low mobility destinations (e.g., Austria and the Netherlands) are shifted down relative to the full distribution of sending countries in high mobility destinations (e.g., Canada). The sending country with the 75th percentile of absolute mobility in Austria still exhibits lower mobility than sending countries with the lowest levels of absolute mobility (25th percentile) in most other destinations. Likewise, the sending country at the 25th percentile of absolute mobility in Canada outperforms the highest mobility sending countries (75th percentile) in most destinations.

Taken together, we find little role for parental attributes (net of income) in explaining cross-country differences in absolute mobility for the children of immigrants. Parental wealth, industry, and location do matter in some cases, but cannot explain the broad differences across destinations. Beyond any direct effect on parental income levels, parental sending country does not seem to be an important explanatory factor.[33]

Destination country effects: Given the limited explanatory power of parental attributes in explaining cross-country differences in mobility, we now turn to differences in destination country attributes. Aspects of the destination economy or society may allow some countries to integrate children of immigrants more readily than others. We consider a country's general level of inequality, its reliance on manufacturing versus services, and features of its immigration policy. In each case, we emphasize that these relationships are exploratory. We present these correlations to provide a first look at destination country attributes that may facilitate or hinder the process of immigrant assimilation.

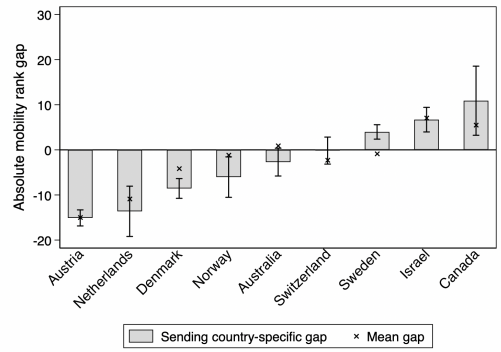
To begin, we ask whether the children of immigrants achieve more parity in absolute mobility with the children of locals in countries with higher (or lower) levels of inequality. If children of immigrants are able to participate in the wide set of institutions that support income equality or higher upward mobility – including high-quality primary schools and strong social capital, among other forces (Chetty et al., 2014a) – then we would expect that mobility gaps between the children of immigrants and locals would be lowest in more equal countries. If instead children of immigrants are excluded from or choose not to participate in these equity-enhancing institutions, we would expect the gap between children of immigrants and children of locals to be largest in these countries.

We explore the correlation between the absolute mobility gap between children of immigrants

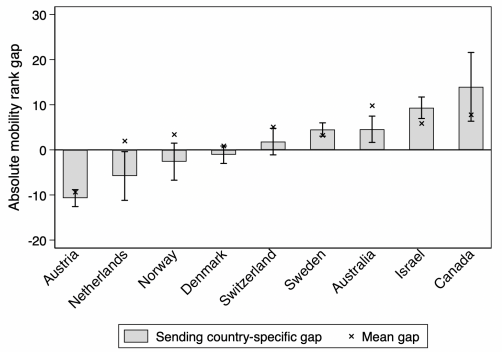
[33]This pattern does not contradict the large literature documenting that aspects of parental country of origin are correlated with the economic behavior of children of immigrants (e.g., Fernández & Fogli, 2009). First, measures of parental country attributes, such as labor force participation, are associated with children's behavior in the destination country, but these factors do not explain much of the variation (that is, R-squared is low). Second, these parental country characteristics are correlated with parental income. Jensen & Manning (2023) find that associations between attributes and child outcomes disappear after controlling for parental income.

Figure 10: Country-specific mobility estimates across various destination countries

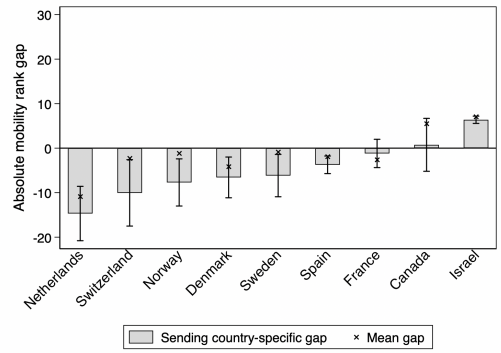
(a) Turkey, sons



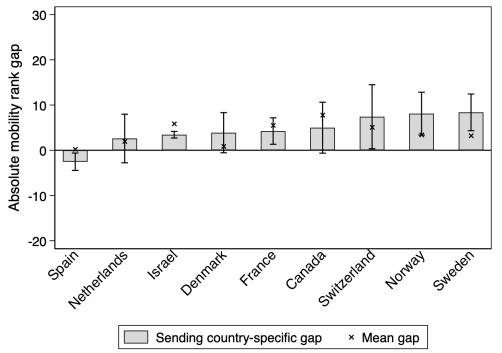
(b) Turkey, daughters



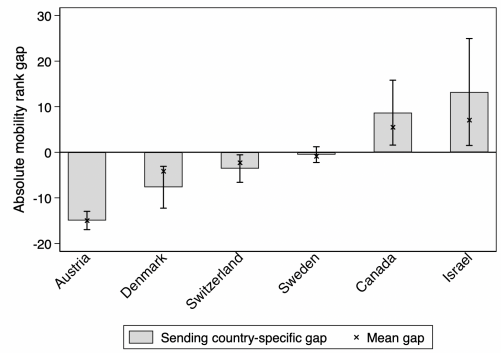
(c) Morocco, sons



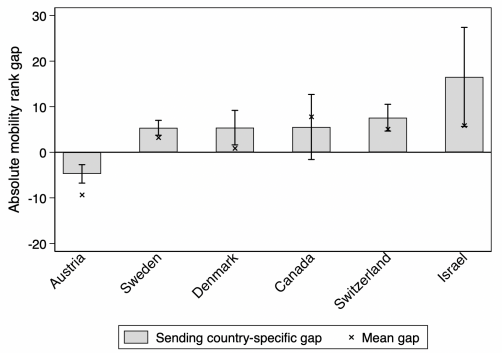
(d) Morocco, daughters



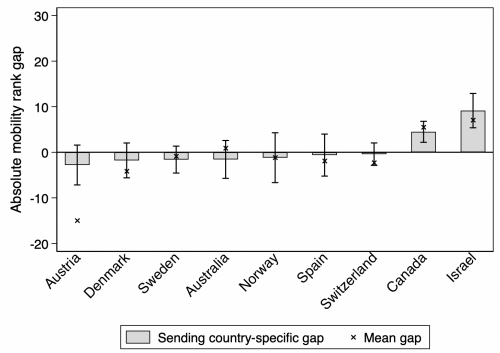
(e) Yugoslavia, sons



(f) Yugoslavia, daughters



(g) Germany, sons



(h) Germany, daughters

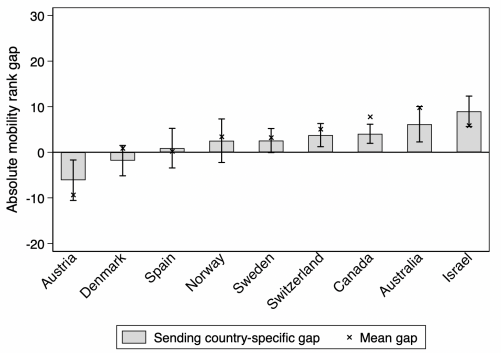
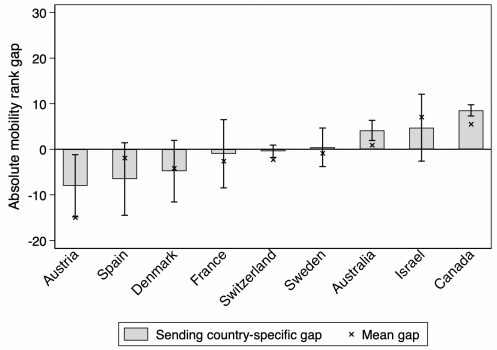
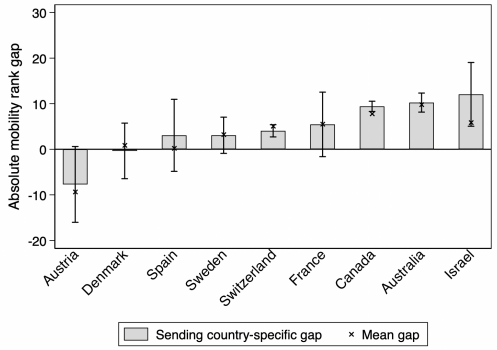


Figure 10: Country-specific mobility estimates across various destination countries (cont.)

(i) Italy, sons



(j) Italy, daughters



Notes: This figure plots estimates of mobility parameters for the sons and daughters of immigrants from Turkey, Morocco, former Yugoslavia, Germany, and Italy. To obtain estimates, we replace the migrant-parent dummy and interaction term with a sending country-specific dummy and interaction term in Specification 1. Each panel refers to one sending country, and the bars refer to the gap in absolute mobility when compared to children of locals in the destination country indicated on the x-axis. Crosses indicate mean gaps in absolute mobility between children of locals and children of all immigrants in the destination country indicated on the x-axis. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

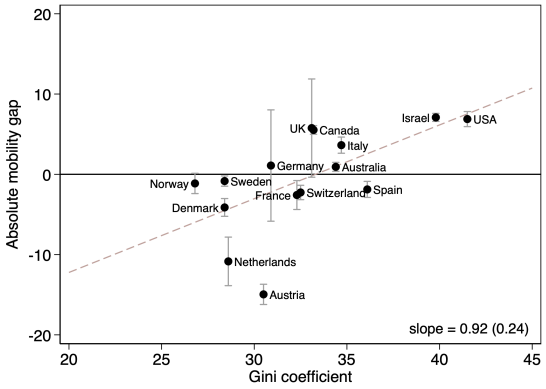
and locals and the Gini coefficient as a measure of inequality in Figure 11. We find a strong positive relationship between the absolute mobility gap and the overall Gini coefficient in the economy for sons (Panel a) – that is, the sons of immigrants have *differentially low mobility* in countries (like Austria and the Netherlands) where labor market earnings are more equal. By contrast, when we consider daughters in Panel (b), we do not observe a strong relationship between absolute mobility gaps and our measure of labor market equality. Together, these results suggest that sons of immigrants do not benefit as much from institutions that promote equality for locals, whereas the daughters of immigrants are far less sensitive to these local conditions, experiencing high levels of absolute mobility in most destination countries.

Various studies suggest that immigrants and their children are less likely or less able to take advantage of mobility-enhancing institutions such as vocational training, apprenticeships, and union protections, which are common in low-inequality countries like Austria and the Netherlands (for a general discussion of these institutions and their relation to mobility, see: Ryan, 2001; Dustmann, 2004; Pekkarinen et al., 2009; Freeman et al., 2015; Stuhler & Biagi, 2018; Chuard & Schmiedgen-Grassi, 2020; Biasi, 2023). Furthermore, this cluster of institutions is more common in the manufacturing sector, which is more likely to employ men than women, and could help to explain why mobility gaps are larger for the sons of immigrants than for daughters (Ngai & Petrongolo, 2017).[34] Carlana et al. (2022) document that, in Italy, children of immigrants are less

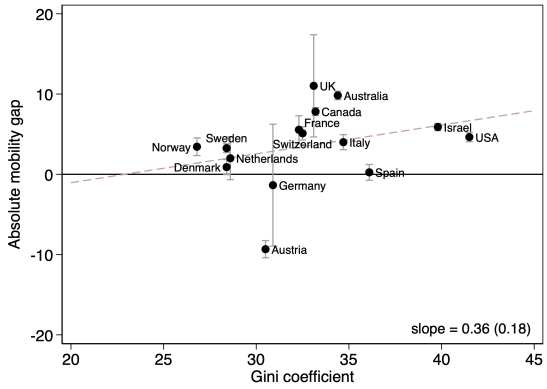
[34]For gender ratios in services across countries, see, e.g., https://ourworldindata.org/grapher/share-of-male-vs-

Figure 11: Association between mobility gaps inequality in destination countries

(a) Absolute mobility gaps and inequality, sons



(b) Absolute mobility gaps and inequality, daughters



Notes: In all panels, this figure plots estimates of β_m from Specification 1 (absolute mobility difference between children of immigrants and children of locals) for each destination country on the y-axis. In panels (a) and (b), we plot the country-level 2014 Gini coefficient on the x-axis (from OECD data explorer: https://data-explorer.oecd.org/). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

likely than children of Italian-born parents with the same income to join the higher tracks in the educational system. Förster & Königs (2020) and Altzinger & Schneebaum (2018) find similar patterns in Austria. The children of immigrants are less likely than the children of the local born to secure apprenticeships in Norway, Switzerland and Germany even after controlling for school performance because of hiring practices and difference in parental labor market networks (Helland & Støren, 2006; Hermansen, 2013; Imdorf, 2017; Roth & Weißmann, 2022). Prantl & Spitz-Oener (2020) argue that immigrants are less likely to compete with the German born in sectors with worker protections (see also Dodini et al., 2023, for similar results from Norway). In line with these findings, Figure B.18 illustrates that, in Denmark, the primary difference in the educational profiles of children of immigrants and children of locals is the higher rate of dropout and lower rate of vocational training among the sons of immigrants.[35]

Labor market activity: If the sons of immigrants are less likely or less able to participate in school-to-work institutions, we would expect that they would exhibit lower employment rates, conditional on parental income, rather than only lower income conditional on working. We examine differences in employment by replacing child income rank with a binary variable denoting

female-employment-in-services.

[35] In countries with low income inequality, the returns to education are also low (Mogstad et al., 2025). All else equal, economic incentives for investing in education are weaker in these economies, perhaps particularly so for the sons of immigrants if they face higher costs in accessing educational institutions.

whether the adult child is employed in Specification 1.[36] In Figure 12, we then present the correlation between absolute mobility in income (from Figure 5) and differences in employment. For all countries except Canada, Israel and Italy, we find that sons of immigrants are less likely to be employed than sons of locals at the bottom of the parental income distribution (panel (a)). As expected, the estimated gaps in employment are strongly correlated with absolute mobility gaps in income.

The daughters of immigrants also exhibit lower employment rates than the daughters of locals raised at the bottom of the income distribution in many destinations, yet these negative gaps in employment are only weakly correlated with daughters' income mobility (panel (b)). This pattern suggests that daughters of immigrants are able to compensate for lower employment rates at the intensive margin. That is, conditional on working, daughters of immigrants must have higher levels of income compared to daughters of locals, especially at the bottom of the parental income distribution.[37]

Consistent with higher rates of female employment in the service sector, we find that countries with a larger service sector are indeed more conducive to upward mobility for the daughters of immigrants. Comparing panels (c) and (d) reveals that the positive relationship between the absolute mobility gap and the service share of the labor force is more than 60% stronger for daughters of immigrants than for sons.

College-going: University admissions in most European countries are based on examination results. For those children of immigrants who *do* have school performance good enough to gain admission, college-going may be a pathway to upward mobility (for an overview of the relationship between child education and parental background, see, e.g., Björklund & Salvanes, 2011). To explore the relationship between education and income mobility, we again return to Specification 1, and consider child college attendance as the dependent variable rather than child income rank. Given that our data is drawn from administrative tax records, we only have data on educational attainment from seven of the destination countries in our sample.

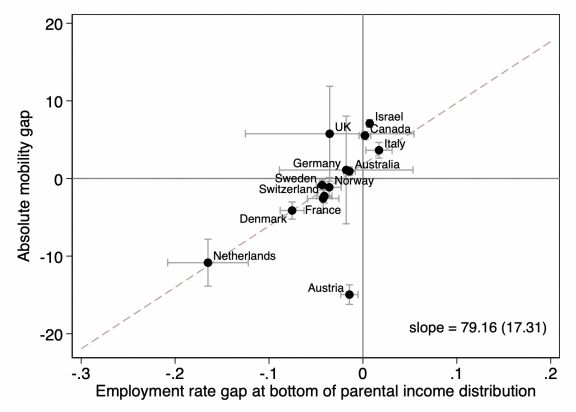
In Figure 13, we map the estimated college-attendance gap against our estimated gap in ab-

[36] We cannot differentiate unemployment from being out of the labor force for various reasons, including due to incarceration. Jensen & Manning (2023) document that sons of immigrants are more likely than sons of local born to be sentenced to prison in Denmark and the same pattern might hold in other countries. However, we do not think that incarceration is driving our results given that incarceration rates are so low in most destination countries (Fair & Walmsley, 2024). High incarceration rates in the US are the one exception but, in the US, the sons of immigrants have higher absolute mobility than the sons of local born. This trend is consistent with far lower rates of incarceration for first-generation immigrants than for local born in the US, which might continue into the second generation (Abramitzky et al., 2024).

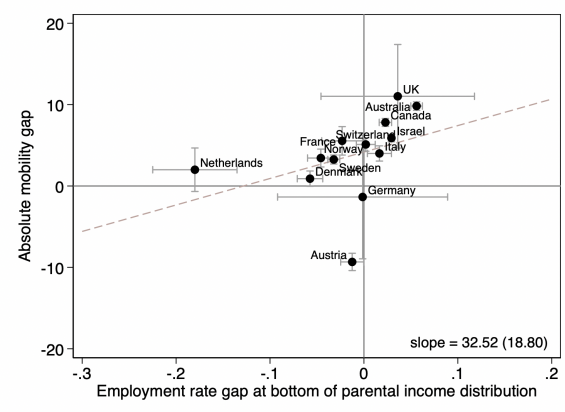
[37] We note that the economic outcomes of sons and daughters of immigrants may be linked through the marriage market. If daughters of immigrants expect to marry sons of immigrants who face weak job prospects, they may invest more heavily in themselves or work longer hours to compensate (Chiappori et al., 2009).

Figure 12: Comparing intergenerational mobility in income and in employment

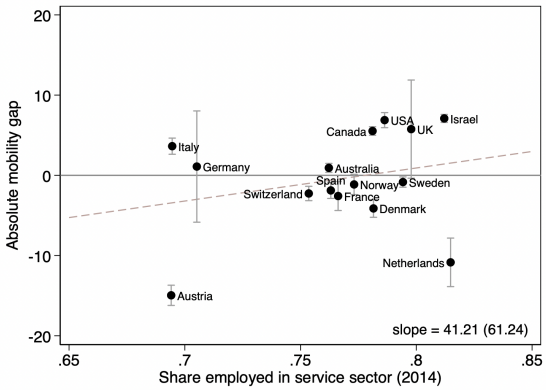
(a) Absolute mobility in employment, sons



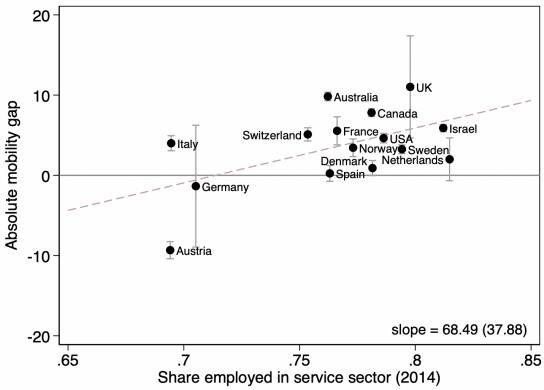
(b) Absolute mobility in employment, daughters



(c) Employment in service sector, sons



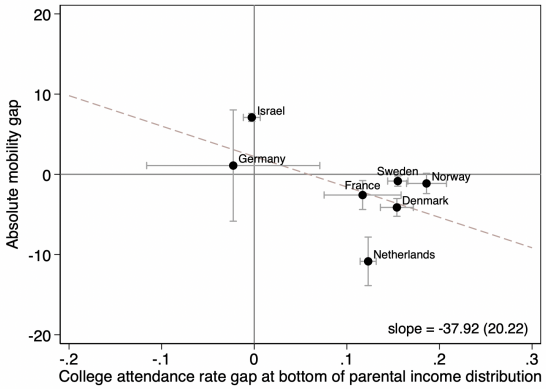
(d) Employment in service sector, daughters



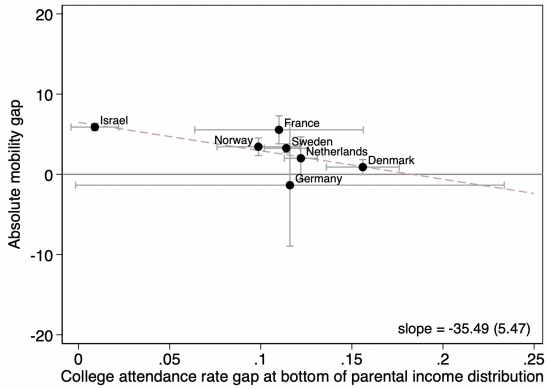
Notes: Panels (a) and (b) plot estimates of Specification 1 with an indicator for child employment as the dependent variable. The β_m estimates, denoting gaps in employment rates, are on the x-axis. Panels (c) and (d) plot country-level shares of employment in the service sector on the x-axis (from the World Bank, see: https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS). In all panels, we plot absolute mobility in terms of income for each country (see Figure 5) on the y-axis. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

Figure 13: Comparing intergenerational mobility in income and in college going

(a) Absolute mobility, sons



(b) Absolute mobility, daughters



Notes: This figure plots estimates of Specification 1 with an indicator for college attendance as the dependent variable. The β_m estimates, denoting gaps in college attendance, are on the x-axis; note the different scales in the two panels. On the y-axis, we plot absolute mobility in terms of income for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

solute income mobility from Figure 5. We find that both the sons *and* daughters of immigrants at the bottom of the income distribution are more likely to go to college than similar children of the local born (see panels (a) and (b) of Figure 13). However, higher college attendance is negatively correlated with the absolute mobility gap in income for children of immigrants.[38] College attendance itself is unlikely to lower mobility. Rather, the relative college-going rates for children of immigrants are highest in Scandinavian countries that may have other barriers to mobility, or children of immigrants may earn a lower return for college going than do children of the local born.

Immigration history and policy: Beyond features of the economy, the outcomes of children of immigrants may also be influenced by a country's immigration policy and openness to immigration. In Figure 14 we plot gaps in absolute mobility between children of immigrants and children of local born against different proxies for each destination's openness to immigrants.

Access to citizenship: We first consider a key immigration policy: access to citizenship for the children of immigrants as measured by the Global Birthright Indicators dataset (GLOBALCIT, 2017). The children of immigrants have full access to citizenship in countries with "birthright citizenship" laws, and can apply for citizenship with varying degrees of difficulty in other settings. Providing citizenship to children of immigrants offers full access to labor markets and education

[38] These findings are robust to excluding the relatively noisy estimates based on linked survey data from Germany.

and allows for long-term planning and investment in the destination country. Prior work finds positive causal effects of citizenship on labor market and educational outcomes (Avitabile et al., 2013; Gathmann & Keller, 2018; Hainmueller et al., 2019; Govind, 2021; Felfe et al., 2020, 2021; Govind & Sirugue, 2023). Consistent with this research, panel (a) of Figure 14 shows a negative correlation between the degree of difficulty in accessing citizenship and absolute mobility gaps, particularly for sons of immigrants but also for daughters (Panel (b)).[39]

Attitudes towards immigrants: In addition to formal policies such as access to citizenship, attitudes and prejudice against immigrants and their children are also likely to be related to their outcomes in destination countries (e.g., because of discrimination against minorities in the labor market, see Riach & Rich, 2002; Bertrand & Mullainathan, 2004; Carlsson, 2010; Oreopoulos, 2011). Panels (c) and (d) of Figure 14 show the correlation between gaps in absolute income mobility and Gallup's Migrant Acceptance Index (Esipova et al., 2018). The index is based on questions about whether respondents think that migrants moving into their countries, becoming neighbors, or marrying into their families is a good or bad thing; higher values indicate higher levels of migrant acceptance. Higher levels of migrant acceptance on this index are associated with lower gaps in absolute mobility between children of immigrants and children of local born.

Share of children of immigrants: A final proxy for a country's recent openness to immigration is the share of children in the population who have immigrant parents (e.g., Beine et al., 2020; Uebelmesser et al., 2013). We expect a positive relationship between the immigrant share and upward mobility if this measure is a proxy for recent openness toward immigrants. However, the immigrant share may reduce upward mobility if a higher share is associated with greater labor supply in occupations and industries where children of immigrants tend to concentrate or with children growing up in more isolated immigrant enclaves (see, e.g., Beaman, 2012; Danzer et al., 2022; Kruse, 2024).[40] Panels (e) and (f) of Figure 14 show that a higher share of children of immigrants is positively correlated with absolute mobility for daughters of immigrants and has a limited positive association with mobility for sons, suggesting that potential negative labor supply effects are dominated by the positive effects of immigration policies.

Taken together, these three measures suggest that destinations that are more open to immigration, as measured by attitudes, policy, and realized immigration, offer better conditions for upward mobility for the children of immigrants. We note that the causal direction of this relationship is unclear: it could be that the population holds more positive attitudes toward immigration in countries where immigrants are more economically successful. However, citizenship policy is

[39] We exclude Israel from this figure because its citizenship policy differs for the children of Jewish and non-Jewish immigrants. Attitudes towards immigrants also vary by immigrants' religion and the share of children of immigrants in the population is an outlier relative to all other destinations (40%).

[40] Such potential mechanisms are similar to labor market effects of immigration on locals as discussed in e.g., Altonji & Card (1991).

highly persistent and the share of children of immigrants is determined by past immigration policy. Therefore, these measures are more likely to suggest that upward mobility is more attainable in countries that are open to immigration.

7 Robustness

In this section, we explore the sensitivity of our results to a series of measurement choices. As in Section 6, we focus on differences in absolute mobility, but comparable results considering differences in relative mobility are included in Appendix B.3.

7.1 Emigration

Ideally, we could follow all children born in a destination country even if they chose to move elsewhere. In practice, both the administrative and survey data in our analysis are limited to children who were born in and remain in the destination country through adulthood. If the children of immigrants are more likely to emigrate from their country of birth (either to return to their parents' home country or to move elsewhere), and staying in the destination country is selective (either positively or negatively), differential rates of emigration could affect our estimated differences in absolute mobility.

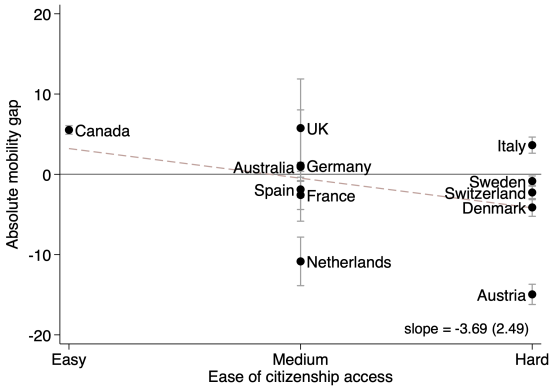
For five destination countries with population register data available over a long period of time, we can investigate differences in emigration. We track children from age 14 until age 35 and confirm if they remain in the population (and are not deceased). We assume that children who are no longer in the population moved out of the country. Next, we calculate the rates of emigration separately for children of local born and children of immigrants before taking the difference between the two. We plot these differences in emigration rates against differences in absolute mobility in Figure 15. Children of immigrants are indeed 2-4 percentage points more likely to leave their country of birth. However, we do not see a systematic relationship between differences in emigration rates and absolute mobility.

7.2 Alternative child cohorts and parental income measures

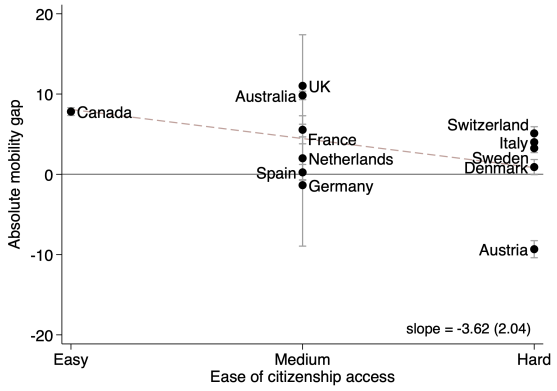
Parental income ranks derived from only a few years of parental income are relatively more sensitive to temporary income shocks, and temporary income shocks could affect immigrant parents more than local-born parents. To verify that our results are not sensitive to alternative parental income measures, we compare our results when measuring total parental income from 1994-2000 and 1980-2000, respectively, an exercise that we can try for five destination countries. Figure 16, panels (a) and (b), include differences in absolute mobility estimated using these two

Figure 14: Intergenerational mobility and immigration policy

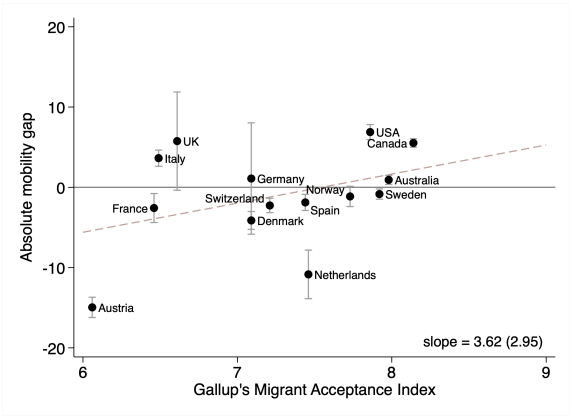
(a) Access to citizenship, sons



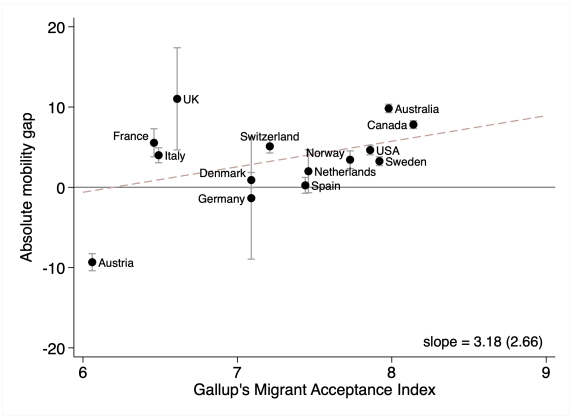
(b) Access to citizenship, daughters



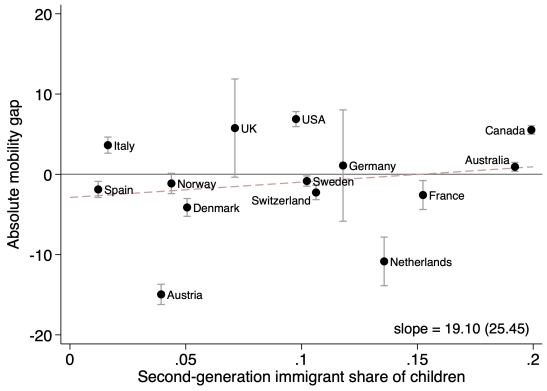
(c) Attitudes towards immigrants, sons



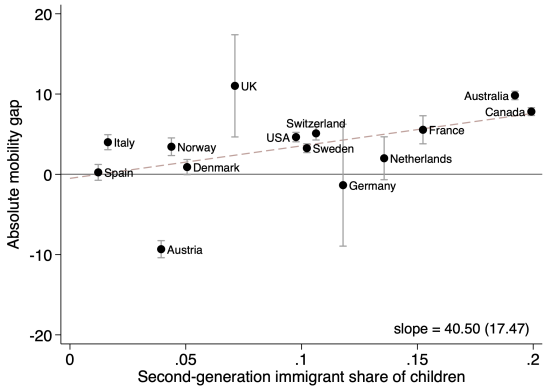
(d) Attitudes towards immigrants, daughters



(e) Share of children of immigrants, sons



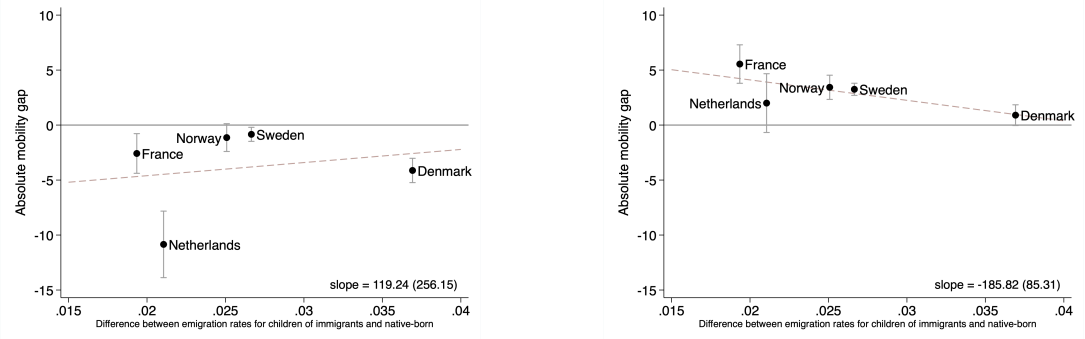
(f) Share of children of immigrants, daughters



Notes: This figure plots absolute mobility gaps against various characteristics for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. Ease of access to citizenship is from the CITLAW Indicators, see Honohan et al. (2017); we show the same correlations using ease of access to citizenship measures from MIPEX in Figure B.20. Attitudes towards immigrants are from Gallup's Migrant Acceptance Index, see: https://news.gallup.com/poll/216377/new-index-shows-least-accepting-countries-migrants.aspx and https://news.gallup.com/poll/233147/migrant-acceptance-canada-follows-political-lines.aspx. Shares of children of immigrants are calculated using our primary datasets as described in Section 3; for the US, we calculate this share from the Current Population Survey. 95% confidence intervals indicated.

Figure 15: Intergenerational mobility and emigration rate

(a) Sons (b) Daughters



Notes: This figure plots absolute mobility gaps against differences in emigration rates between children of immigrants and children of locals for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

alternative measures of parental income. The 45-degree line indicates similar absolute mobility differences across the two measures of parental income. For all countries, estimates are close to the 45-degree line.

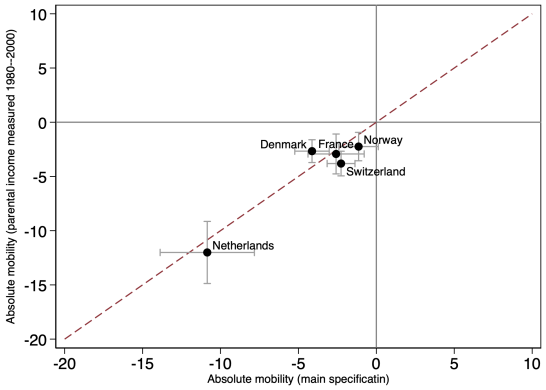
Data for some destination countries allow us to consider the outcomes of children from more recent birth cohorts. One concern is that mobility patterns could change over time with changes in sending country composition and destination country characteristics, e.g. because of changes in policy or industrial structure due to digitalization. We update our income mobility results by shifting all data for both parents and children forward by four years, e.g., the latest year of child income we consider is now 2019 instead of 2015.[41] Thus, we compare two sets of cohorts: children born in 1978-1983 and 1982-1987 respectively. We have data for this exercise for eight destination countries. Figure 16, panels (c) and (d), plots the estimated differences in absolute mobility for these two sets of cohorts. The 45-degree line indicates stable absolute mobility differences across the two sets of cohorts. For all countries, we see that estimates are close to the 45-degree line, with the only exception being sons of immigrants in Austria who are somewhat less disadvantaged (but still experience substantial absolute mobility gaps) in recent years.

In general, our results using alternative child cohorts and parental income measures indicate stable estimates of differences in absolute mobility between children of local born and children of immigrants. We encourage caution in interpreting the main outlier in our results – the particularly low levels of absolute mobility of sons of immigrants in Austria – which seems to be exacerbated by cohort- and year-specific factors.

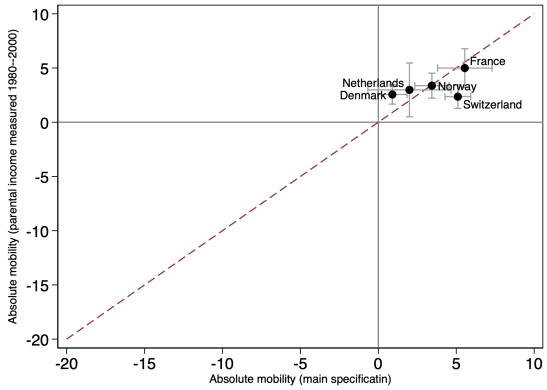
[41] We do not want to consider child outcomes in the years affected by the COVID-19 pandemic, so the last year we consider is 2019.

Figure 16: Alternative child cohorts and parental income measures

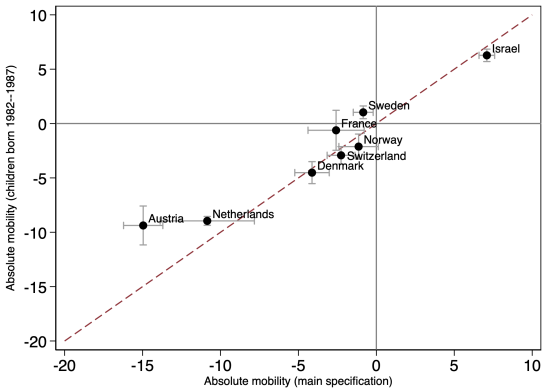
(a) Parental income 1980-2000, sons



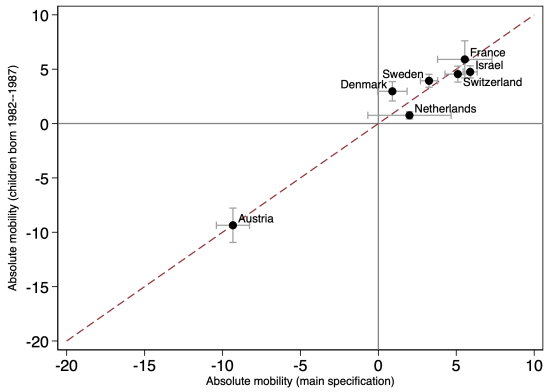
(b) Parental income 1980-2000, daughters



(c) Child cohorts 1982-1987, sons



(d) Child cohorts 1982-1987, daughters



Notes: This figure plots estimates of β_m (absolute mobility difference) from Specification 1 for each destination country. Immigration status is determined by father's country of birth. Children are born in 1978-1983 (and 1982-1987 in panels (c) and (d)). Child income is measured in 2014-2015, and parental income in 1994-2000 (and 1980-2000 in panels (a) and (b)). 45-degree line in dashed red. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

7.3 Cross-sectional results

In Appendix C, we use cross-sectional data from each of the destination countries to compare the income of immigrants and their sons relative to the local born; these results are summarized in Figure B.23 in Appendix B.4. The benefit of using cross-sectional data is that this type of analysis can potentially be extended to a wider range of destination countries for which linked parent-child administrative data do not exist. The cost is that, without parent-child links, we cannot control for parental income or estimate differences in intergenerational mobility parameters.

We find that our results from Section 4 using linked data generally hold when using cross-sectional data. Immigrants in the parental generation (observed in 1980) generally had lower levels of income compared to the local born. Children of immigrants (observed in 2010) closed much of this income gap, with the exception of the Netherlands. These common patterns across data sources suggests that cross-sectional data can be used to measure convergence rates across immigrants and their children. However, we note that the level of income gaps observed for first-generation immigrants differs between the cross-sectional and linked samples in some cases (lower income in the cross-section in Germany, Switzerland and the US, and higher income in the cross-section in Denmark, France, Norway and Sweden).

8 Conclusions

This paper uses harmonized administrative (or survey) data from 15 immigrant-receiving countries to provide an intergenerational and comparative perspective on the income mobility of immigrants and their children. We start by establishing two facts in our data. First, first-generation immigrants earn less than the local born in many receiving countries, but such differences are typically much smaller by the second generation. Second, there are notable gender differences in income gaps, with daughters of immigrants enjoying near-income parity with the daughters of local-born parents, while the sons of immigrants experience larger gaps with the sons of locals.

A large portion of the second-generation gap in income can be attributed to the fact that the children of immigrants are raised in lower-income households in many destinations. Differences in parental income explain nearly all of the income gaps in the second generation for daughters and around a third of the income gap for sons. After accounting for parental income, remaining income gaps are driven by differential rates of absolute mobility. Daughters of immigrants exhibit higher absolute mobility than daughters of locals in almost every destination in our sample, whereas the sons of immigrants only enjoy this advantage outside Europe (Australia, Canada, Israel and the US), as well as in the UK.

The remaining income gap for sons is largest in countries where general income inequality is low, perhaps due to institutions like vocational training and apprenticeship programs that may

be less open to the sons of immigrants. Given the challenge of working with cross-country data, we limit our attention to these mechanisms, but we suspect that other factors like labor market policy (flexibility vs. regulation and the strength of union activity), social welfare programs, and the presence of immigrant enclaves may also play a role.

All children of immigrants achieve higher rates of upward mobility in countries with a long history of immigrant reception (Australia, Canada, Israel, and the US), as well as in the UK. The sons of immigrants who settle in Europe experience lower absolute mobility in both employment and income than sons of local born. This pattern suggests that policies and economic conditions that facilitate labor market access for under-employed sons of immigrants may be particularly important for reducing the assimilation gap between European and non-European destinations.

This paper only considers the mobility of children of immigrants in terms of individual income and employment. There are many other aspects of the lives of children of immigrants that are worth future study, including marital status, spousal attributes conditional on marriage, household income, total fertility, age at first birth and first marriage, and so on. Particularly given the gender gap in income gaps uncovered in this work, we expect that analyzing these outcomes will provide useful insights into the mechanisms underlying the upward mobility of the children of immigrants.

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A Data details

A.1 Cross-sectional data

In addition to our results using linked data on children and their parents, we follow the strategy by Abramitzky et al. (2021) and reproduce their Figure 1 using cross-sectional data. Doing so allows us to check if our main descriptive findings hold when using non-linked data. Checking if our findings are consistent across data sources is important for future research in countries where linked data are not available.

We proceed by constructing cross-sectional datasets with immigrant fathers in 1980 and sons of immigrants in 2010. The datasets on fathers are constructed as follows. We consider the full population residing in each destination country as of 1 January 1980. We keep only men aged 30-50. We observe child-parent links, and keep only those with at least one child present in the population. We keep only the fathers born in the destination country or in one of the top sending countries identified from the linked parent-child data (see details below). We merge on information on total income (including benefits and capital income, similar to Chetty et al. (2020)).

The dataset on sons are constructed as follows. We consider the full population residing in each destination country as of 1 January 2010. We keep only men aged 30-50. We observe child-parent links, and keep only individuals with a known father. Next, we drop all sons born outside the destination country, and those with fathers not born in the destination country or in one of the top sending countries identified from the linked parent-child data. We merge on information on total income (including benefits and capital income, similar to Chetty et al. (2020)).

Because we observe actual income of both fathers and children, we do not need to predict income scores based on age and occupation like Abramitzky et al. (2021). To include individuals with zero income, we express all results on income in terms of income ranks (rather than a log-like transformation of income).[42] Ranks are determined within birth cohorts, which also makes results less sensitive to differences in age distributions across immigrants and local-born.

A.2 Linked parent-child data

To construct the linked parent-child data, we start by identifying individuals who are fully tax liable in each destination country in both 2014 and 2015. By doing so, we are certain that our income measures reflect the full income of each individual.[43] In most of our included destination countries, the entire population appears in the administrative data, even if no income. Those

[42] A log-transformation will exclude individuals with zero income, and an inverse hyperbolic transformation of income is unit sensitive (see Chen & Roth, 2023).

[43] In contrast, Chetty et al. (2020) construct "a strongly balanced sample of children by assigning incomes of zero to children who do not appear in the tax data" as individuals with zero income may not appear in the US data.

children who do not appear would either be emigrants or deceased children.

We merge on information on total income (including labour market income, capital income, and benefits/transfers, similar to Chetty et al., 2020) from 2014 and 2015 and adjust for inflation. Next, we keep only those individuals born in the destination country between 1978-1983 and with a known father, so that we can determine the paternal country of origin. We continue by constructing measures of inflation-adjusted total parental income between 1994-2000 (including labour market income, capital income, and benefits/transfers) and merge this to the data on children using the child-parent links.

After constructing the linked dataset on total income for children (2014-2015) and parents (1994-2000), we follow Chetty et al. (2020) and drop parents with a total income equal to or less than zero.[44] Next, we construct within-cohort ranks of both total child income and total parental income. Because we observe actual child-parent links, we can ignore changing household composition (we observe both parents and their income, even if they are in different households). Therefore, unlike Chetty et al. (2020), we do not need to consider the weighted mean of parental income before constructing income ranks. Taking the mean would, in our case, be rank preserving.

For our main results, we consider all paternal countries of origin. When considering specific sending countries, we only keep the top sending countries; countries for which we observe at least 100 sons or daughters of immigrants.

In Appendix C, we check if our results change if we expand the number of years over which we observe parental income to 1980-2000 rather than 1994-2000. This exercise is relevant as parental income ranks derived from fewer years of parental income are relatively more sensitive to temporary income shocks. Otherwise, the data construction is identical to that described above.

We also check if our results are consistent across cohorts by considering children born in 1982-1987, rather than 1978-1983. Although the latest available data from the US is from 2015, data from other destination countries allow us to consider the outcomes of children from more recent birth cohorts. We do not want to consider child outcomes in the years affected by the COVID-19 pandemic, so the latest year we consider is 2019. To consider the outcomes of more recent birth cohorts, we start by updating our income mobility results by shifting all years of included data by four years, e.g., the latest year of child income we consider is now 2019 instead of 2015. Otherwise, the data construction is identical to that for the 1978-1983 cohorts.

[44] Chetty et al. (2020) do so to drop parental with large wealth (proxied by negative capital income). See their Online Appendices A & C for details.

Table A.1: Overview of linked parent-child data sources and income measures

Destination country	Data sources	Main income measure
Australia	Administrative data, full population	Total income
Austria	Administrative data, full population	Earned income
Canada	Administrative data (full population) linked to Census data (random sample of households)	Total income
Denmark	Administrative data, full population	Total income
France	Combined survey and administrative data	Total income (children), earned income (parents)
Germany	Survey data	Total post-government income
Israel	Administrative data, full population	Earned income
Italy	Administrative data, full population	Total income
The Netherlands	Administrative data , full population and survey	Total income and labor earnings
Norway	Administrative data, full population	Total income
Spain	Administrative data, full population	Total gross income[45]
Sweden	Administrative data, full population	Total income[46]
Switzerland	Administrative data, full population	Earned income
United Kingdom	Survey data	Total income
United States	Administrative data, full population	Total income

Notes: This table summarizes the data sources and income measure used for each destination country. See Appendices A and C for details on sample construction and on the data from each country.

A.3 Cross-country data sources

In Section 6, we use data on a range of country-level characteristics. These include:

- The country-level 2014 Gini coefficient from the OECD data explorer, see: https://data-explorer.oecd.org/.
- Service sector share of employment from the World Bank, see: https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS.
- Ease of access to citizenship from the CITLAW Indicators (GLOBALCIT, 2017), see Honohan et al. (2017) and https://cadmus.eui.eu/handle/1814/64605.
- Ease of access to citizenship from the Migrant Integration Policy Index 2020, see https://www.mipex.eu/access-nationality.
- Attitudes towards immigrants from Gallup's Migrant Acceptance Index (Esipova et al., 2018), see: https://news.gallup.com/poll/216377/new-index-shows-least-accepting-countries-migrants.aspx and https://news.gallup.com/poll/233147/migrant-acceptance-canada-follows-political-lines.aspx.

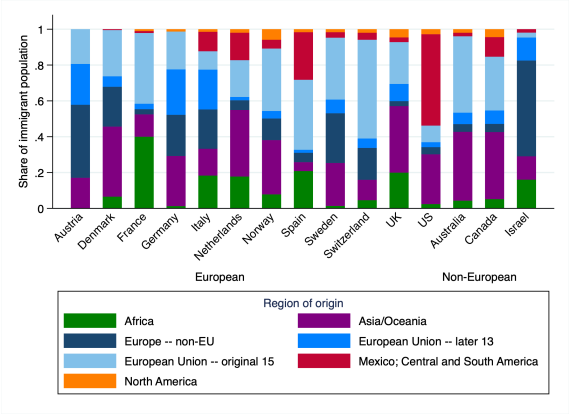
For Figure B.1 and Tables B.1 and B.2, we use data from the "International migration database - stocks of foreign-born population" accessible through the OECD Data Explorer: https://data-explorer.oecd.org/

B Additional results

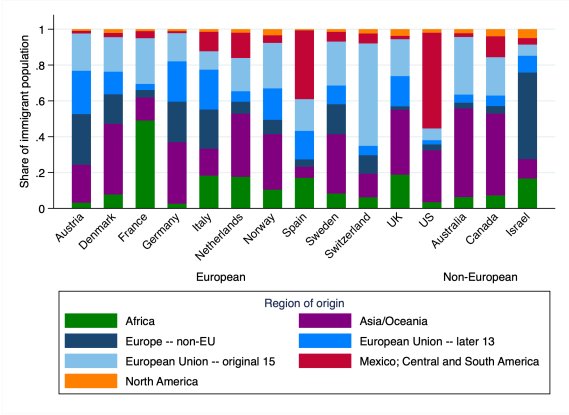
B.1 Cross-country characteristics

Figure B.1: Regions of origin, 2000/2001 & 2011

(a) Origin region of foreign born, 2000/2001



(b) Origin region of foreign born, 2011



Notes: This figure plots shares of sending regions for foreign-born inhabitants in each destination country in 2000/2001 (though 2006 for Germany/United Kingdom and 2009 for Italy - these are the earliest available data) and 2011, respectively. Data are from the "International migration database - stocks of foreign-born population" accessible through the OECD data explorer: https://data-explorer.oecd.org/.

Table B.1: Top 5 countries of origin for immigrants, 2000/2001

Country of origin	Share of imm pop.	Country of origin	Share of imm pop.	Country of origin	Share of imm pop.
1. Australia		**6. Germany**		**11. Spain**	
United Kingdom	0.257	Turkey	0.215	Morocco	0.161
New Zealand	0.084	Russia	0.161	France	0.106
Italy	0.055	Poland	0.117	Germany	0.097
Vietnam	0.038	Italy	0.064	United Kingdom	0.072
China	0.034	Romania	0.048	Argentina	0.048
2. Austria		**7. Israel**		**12. Sweden**	
Bosnia and Herzegovina	0.172	Former USSR	0.535	Finland	0.229
Turkey	0.171	Morocco	0.101	Former Serbia and Montenegro	0.082
Former Yugoslavia	0.170	Romania	0.077	Former Yugoslavia	0.082
Germany	0.168	Poland	0.052	Bosnia and Herzegovina	0.059
Croatia	0.069	Iraq	0.047	Iran	0.059
3. Canada		**8. Italy**		**13. Switzerland**	
United Kingdom	0.111	Romania	0.177	Italy	0.160
China	0.061	Albania	0.077	Germany	0.124
Italy	0.058	Morocco	0.073	Former Serbia and Montenegro	0.108
India	0.058	Germany	0.039	Portugal	0.069
United States	0.044	Ukraine	0.037	France	0.067
4. Denmark		**9. Netherlands**		**14. United Kingdom**	
Turkey	0.113	Suriname	0.125	India	0.112
Germany	0.089	Turkey	0.120	Ireland	0.082
Bosnia and Herzegovina	0.070	Indonesia	0.114	Pakistan	0.054
Norway	0.051	Morocco	0.103	Germany	0.053
Sweden	0.049	Germany	0.084	Poland	0.045
5. France		**10. Norway**		**15. United States**	
Algeria	0.142	Sweden	0.115	Mexico	0.298
Portugal	0.142	Denmark	0.075	Philippines	0.044
Morocco	0.130	United States	0.051	India	0.036
Italy	0.094	United Kingdom	0.049	Vietnam	0.035
Spain	0.078	Pakistan	0.046	China	0.031

Notes: This table reports the top 5 of sending countries of foreign-born residents in each destination country in 2000/2001 (though 2006 for Germany/United Kingdom and 2009 for Italy - these are the earliest available data). Data are from the "International migration database - stocks of foreign-born population" accessible through the OECD data explorer: https://data-explorer.oecd.org/.

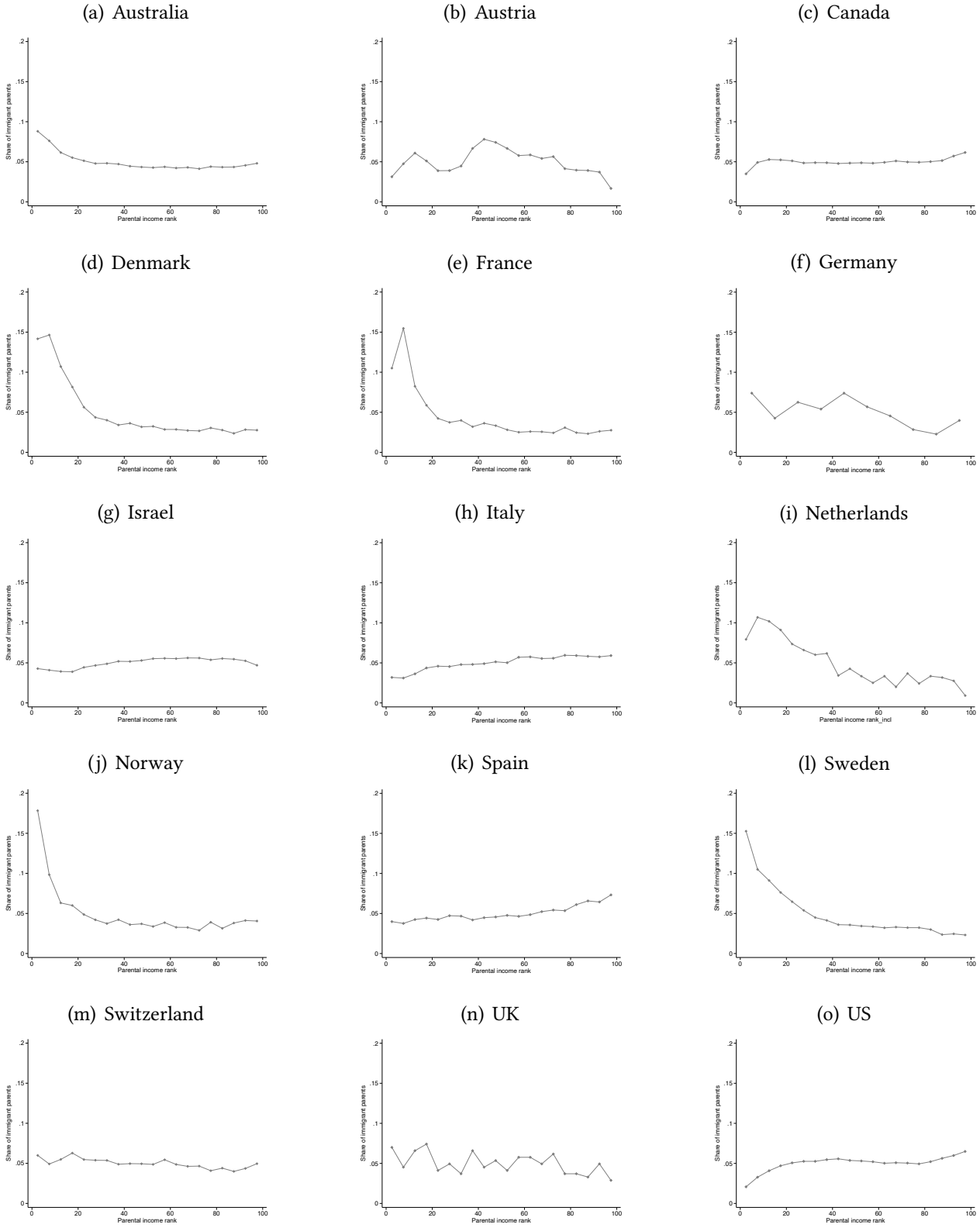
Table B.2: Top 5 countries of origin for immigrants, 2011

Country of origin	Share of imm pop.	Country of origin	Share of imm pop.	Country of origin	Share of imm pop.
1. Australia		**6. Germany**		**11. Spain**	
United Kingdom	0.199	Turkey	0.159	Morocco	0.122
New Zealand	0.090	Poland	0.120	Romania	0.117
China	0.064	Russia	0.106	Ecuador	0.077
India	0.056	Kazakhstan	0.075	Colombia	0.060
Vietnam	0.035	Italy	0.045	United Kingdom	0.051
2. Austria		**7. Israel**		**12. Sweden**	
Germany	0.155	Former USSR	0.475	Finland	0.123
Turkey	0.125	Morocco	0.082	Iraq	0.088
Bosnia and Herzegovina	0.118	Romania	0.051	Former Yugoslavia	0.051
Serbia	0.103	United States	0.045	Poland	0.051
Romania	0.051	Ethiopia	0.043	Iran	0.045
3. Canada		**8. Italy**		**13. Switzerland**	
India	0.081	Romania	0.177	Germany	0.169
China	0.081	Albania	0.077	Italy	0.124
United Kingdom	0.079	Morocco	0.072	Portugal	0.091
Philippines	0.067	Germany	0.039	France	0.070
United States	0.039	Ukraine	0.037	Turkey	0.040
4. Denmark		**9. Netherlands**		**14. United Kingdom**	
Turkey	0.076	Turkey	0.111	India	0.103
Germany	0.067	Suriname	0.105	Poland	0.093
Poland	0.063	Morocco	0.094	Pakistan	0.066
Iraq	0.050	Indonesia	0.078	Ireland	0.064
Bosnia and Herzegovina	0.042	Germany	0.069	Germany	0.044
5. France		**10. Norway**		**15. United States**	
Algeria	0.184	Poland	0.102	Mexico	0.295
Morocco	0.121	Sweden	0.080	India	0.047
Portugal	0.084	Germany	0.047	Philippines	0.046
Tunisia	0.051	Denmark	0.041	China	0.042
Italy	0.046	Iraq	0.038	Vietnam	0.032

Notes: This table reports the top 5 of sending countries of foreign-born residents in each destination country in 2011. Data are from the "International migration database - stocks of foreign-born population" accessible through the OECD data explorer: https://data-explorer.oecd.org/.

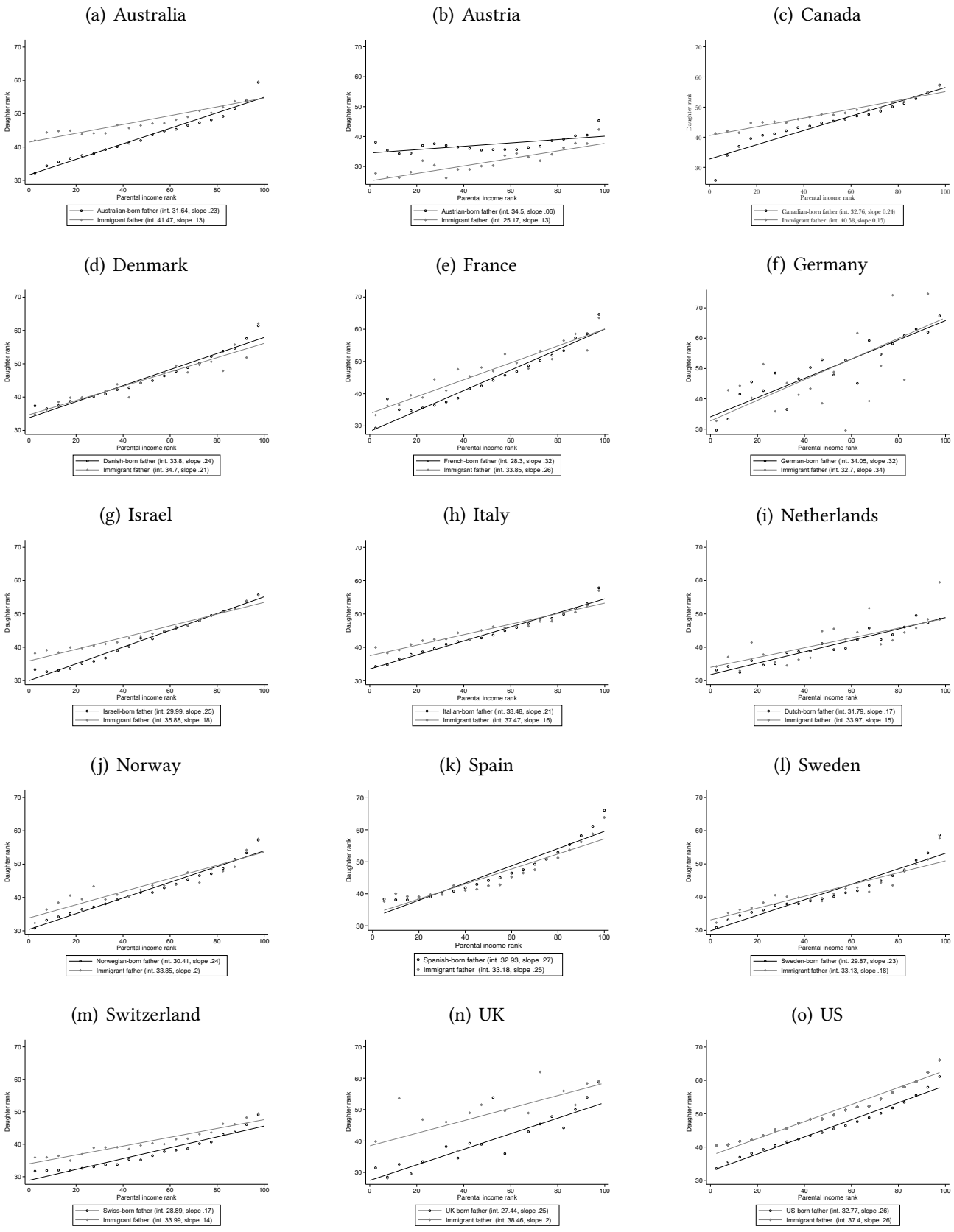
B.2 Main results

Figure B.2: Share of daughters with immigrant parents by parental income ventile



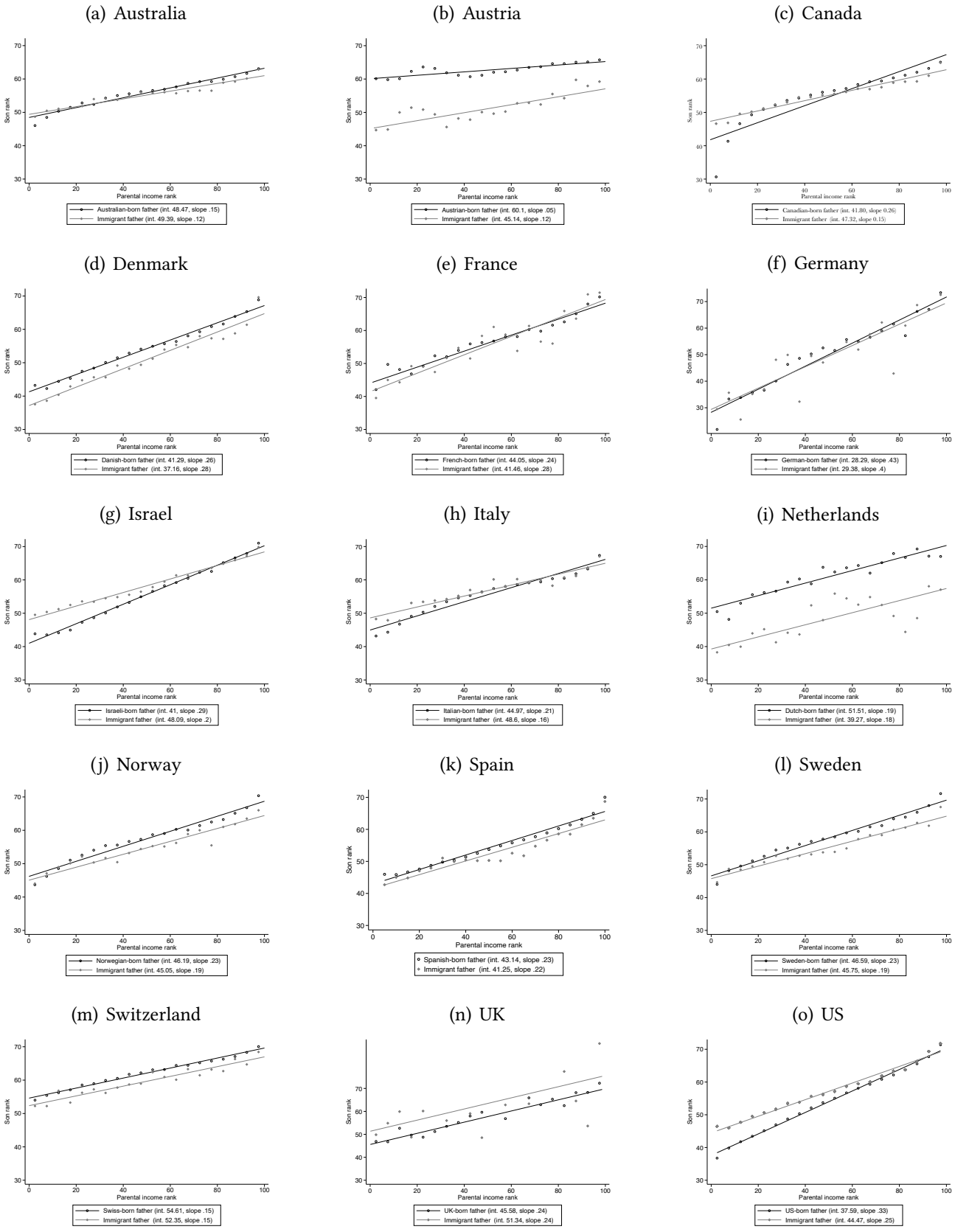
Notes: This figure shows the share of daughters with immigrant parents in each ventile out of the total number of daughters with immigrant parents (across all ventiles). For Germany, for which we rely on survey data, we present decile shares divided by two to maintain a common scale whilst reducing noise in the shares. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Parental income is measured in 1994-2000. Income ranks, 0-100, are determined within child cohorts. See Appendices A and C for details on sample construction and on the data from each country as well as for similar distributions for sons; patterns for sons are practically identical.

Figure B.3: Intergenerational mobility, daughters



Notes: This figure plots estimates of Specification 1 for all destination countries. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

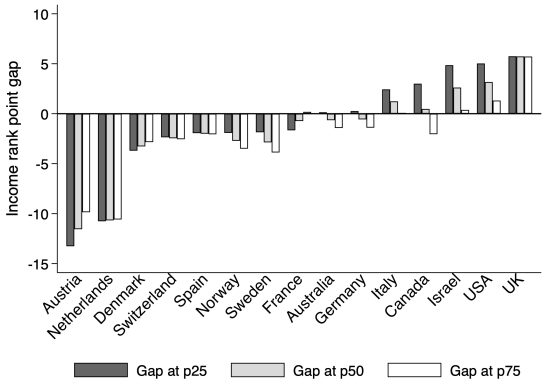
Figure B.4: Intergenerational mobility, sons



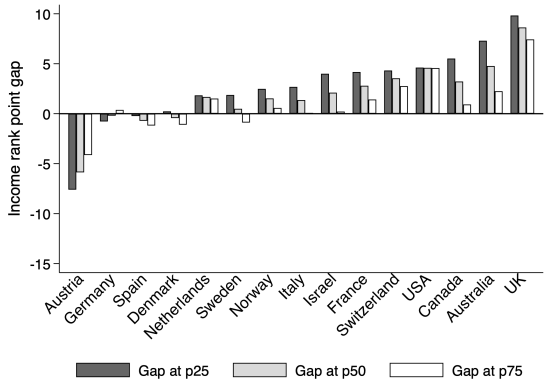
Notes: This figure plots estimates of Specification 1 for all destination countries. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.5: Differences in intergenerational mobility between children of immigrants and children of locals

(a) Mobility by parental income percentile, sons



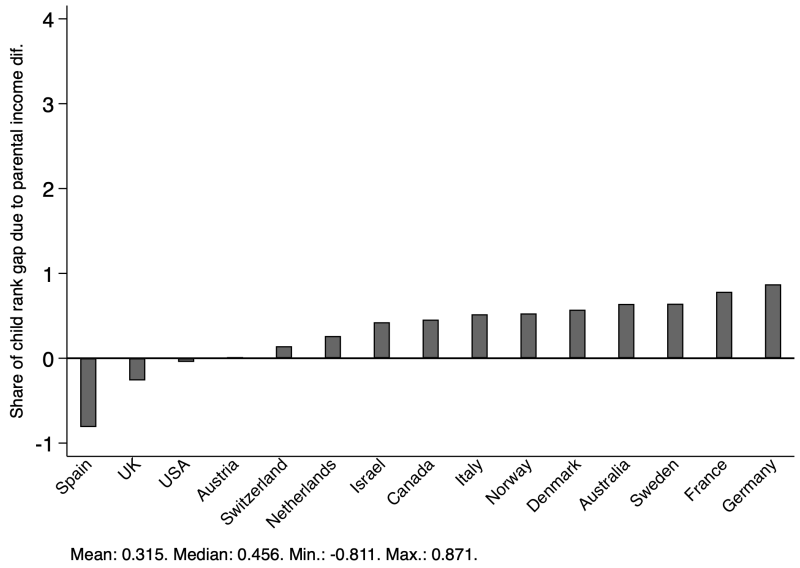
(b) Mobility by parental income percentile, daughters



Notes: This figure plots predicted child income rank gaps at the 25th/50th/75th percentiles of the parental income distribution, by calculating, e.g. the 25th percentile gaps as $gap_{25} = \hat{\beta}_m + \hat{\beta}_{mp} \times 25$ where $\hat{\beta}_m$ and $\hat{\beta}_{mp}$ are the estimated coefficients from Specification 1 for each destination country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

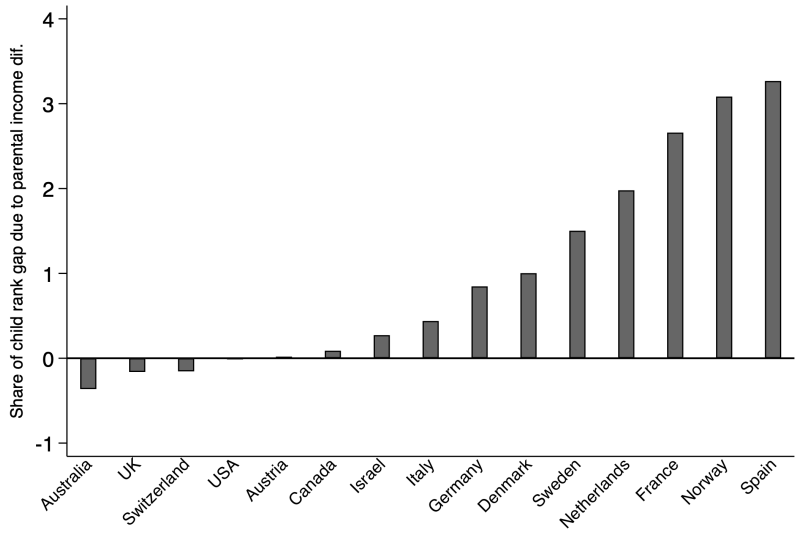
Figure B.6: Shares of Oaxaca-Blinder decompositions of differences in child income ranks

(a) Sons



Mean: 0.315. Median: 0.456. Min.: -0.811. Max.: 0.871.

(b) Daughters

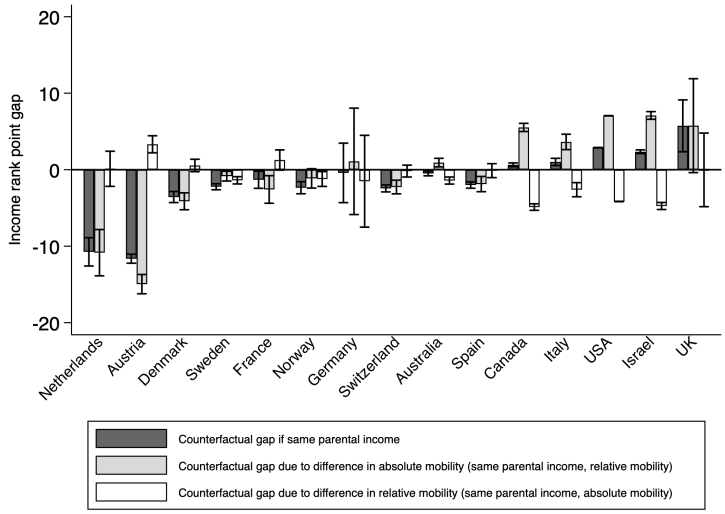


Mean: 0.965. Median: 0.439. Min.: -0.363. Max.: 3.267.

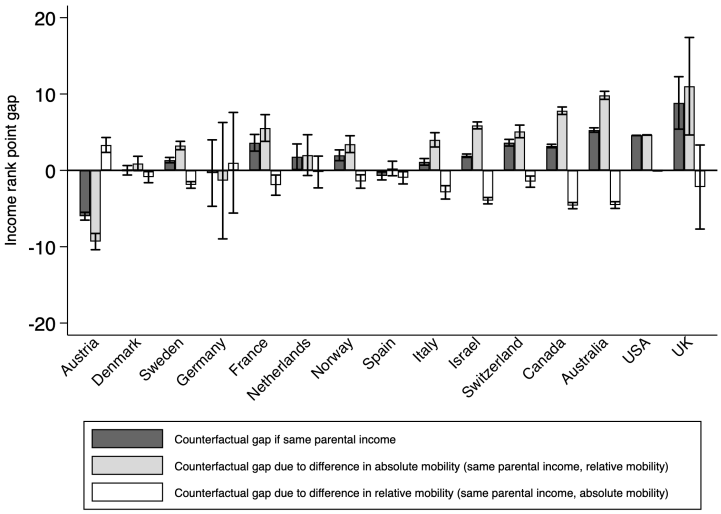
Notes: This figure plots results from a Oaxaca-Blinder decomposition of the difference in mean income rank between children of immigrants and children of locals, using children of locals as the reference group. In this figure, we focus on the share of the total gap explained by differences in parental income by plotting (1-(term B / term A) – where term A and B are from Equation 2). Appendix C contains decomposition results using alternative reference groups for each country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within child birth cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.7: Detailed Oaxaca-Blinder decomposition of unexplained gap

(a) Sons



(b) Daughters



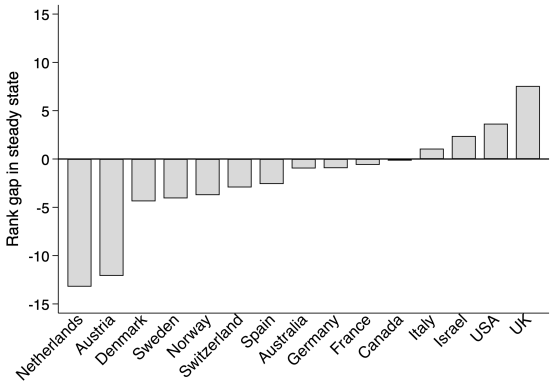
Notes: This figure plots the detailed Oaxaca-Blinder decomposition of the "unexplained" gap in mean income ranks between children of immigrants and children of locals, using children of locals as the reference group. Specifically, the dark gray bars plot term B from Equation 2, which is equivalent to term A *minus* term C. We further decompose term B into:

$$\underbrace{\bar{y}_{mc} - \bar{y}_c}_{\text{A: Total gap}} = \underbrace{\hat{\beta}_m}_{\text{B.1: Unexplained, due to abs. mobility}} + \underbrace{\hat{\beta}_{mp}\bar{y}_{mp}}_{\text{B.2: Unexplained gap, due to rel. mobility}} + \underbrace{(\bar{y}_{mp} - \bar{y}_p)\hat{\beta}_p}_{\text{C: Explained gap}} \tag{4}$$

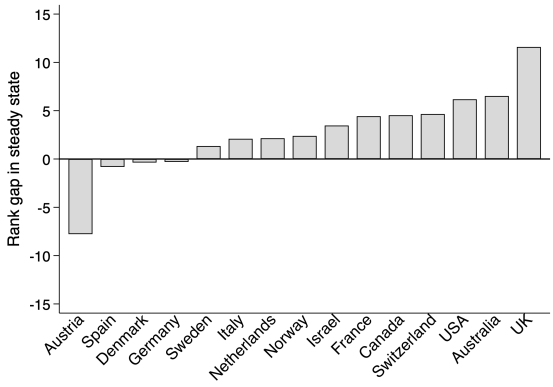
The light gray bars plot term B.1, and the white bars plot term B.2. Appendix C contains decomposition results using alternative reference groups for each country. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.8: Steady state gaps

(a) Steady state income rank gaps, sons



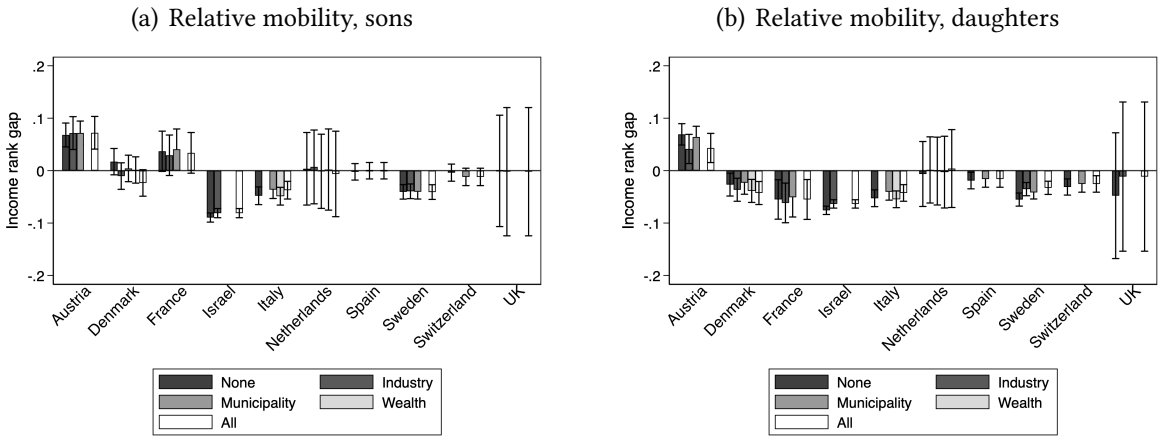
(b) Steady state rank gaps, daughters



Notes: Our analysis in Section 5 compares the outcomes across two generations: children born in 1978-1984 and their parents. However, we may also be interested in potential income rank gaps in the long-run as they evolve over multiple generations. Chetty et al. (2020) develop a framework to determine the levels to which income ranks gaps will converge over many generations (assuming stable mobility parameters in the following generations). Specifically, mean income ranks of children of locals will converge to a steady state of $\bar{y}_c^{SS} = \frac{\alpha}{1-\beta_p}$, and similarly, income ranks of descendants of immigrants will converge to $\bar{y}_{mc}^{SS} = \frac{\alpha+\beta_m}{1-(\beta_p+\beta_{mp})}$. All coefficients are from Specification 1. As such, we can calculate the steady state income rank gaps between children of locals and descendants of immigrants as $\bar{y}_{mc}^{SS} - \bar{y}_c^{SS} = \frac{\alpha+\beta_m}{1-(\beta_p+\beta_{mp})} - \frac{\alpha}{1-\beta_p}$. We plot these steady states income rank gaps by destination country in this figure. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

B.3 Mechanisms

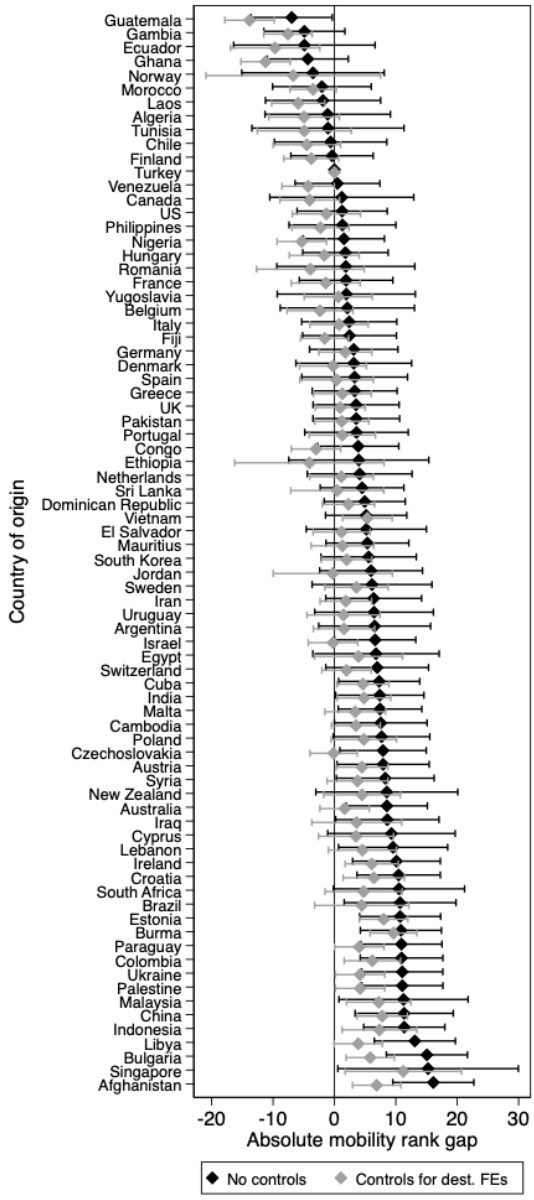
Figure B.9: Intergenerational relative mobility after accounting for other parental characteristics



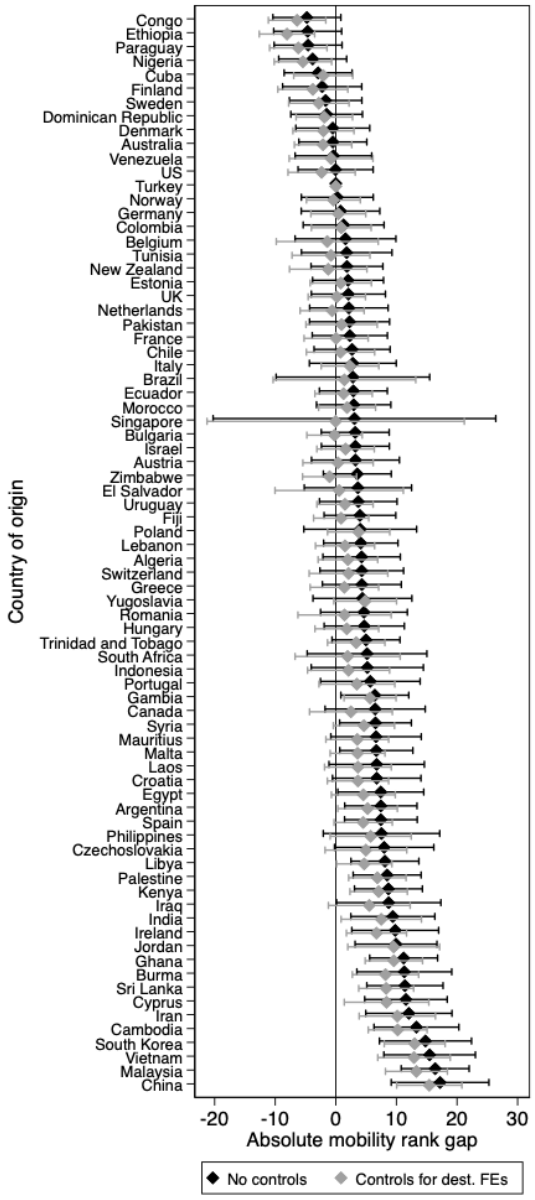
Notes: This figure plots estimates of β_{mp} (relative mobility difference) from Specification 1 for each destination country. We add parental municipality, industry, and ventile wealth fixed effects as controls. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.10: Sending country effects controlling for destination country composition

(a) Absolute mobility gaps, sons



(b) Absolute mobility gaps, daughters

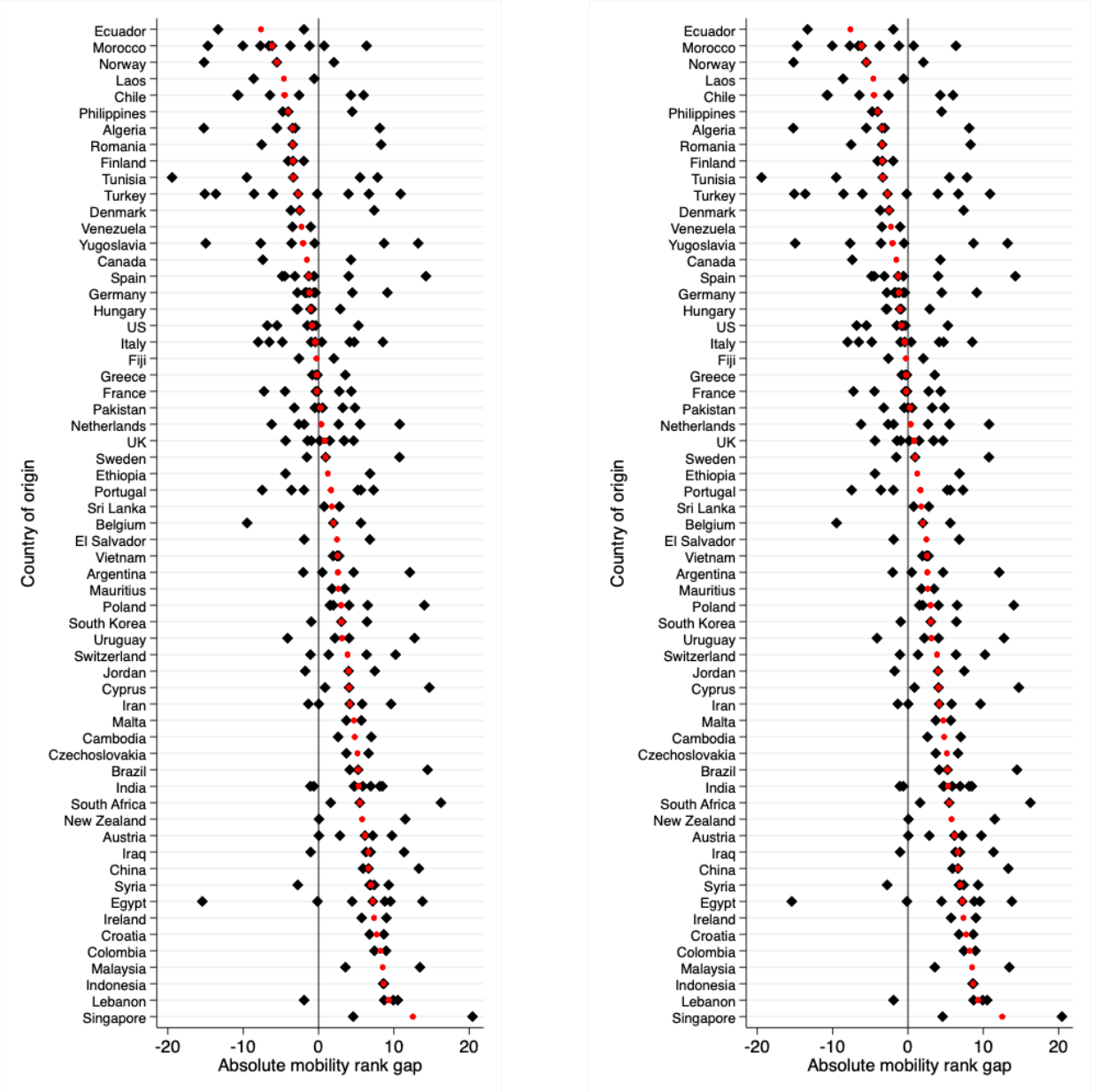


Notes: This figure plots estimates of Equation 3, i.e. we regress the difference in absolute mobility between the children of immigrants for a particular sending country and the children of local-born parents in a particular destination on destination country and sending country fixed effects. Black diamonds report sending country effects estimated alone (that is, dropping the second term in Equation 3), and gray diamonds report coefficients on sending country effects after controlling for destination country effects as well. To obtain the differences needed for this regression, we first replace the migrant-parent dummy and interaction term with a sending country-specific dummy and interaction term when estimating Specification 1. We drop absolute mobility differences that are particularly imprecisely estimated (standard error > 10). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

Figure B.11: Variation in absolute mobility gaps by sending country

(a) Absolute mobility gaps, sons

(b) Absolute mobility gaps, daughters



Notes: This figure plots difference in absolute mobility between the children of immigrants for a particular sending country and the children of local-born parents in a particular destination. To obtain these differences, we first replace the migrant-parent dummy and interaction term with a sending country-specific dummy and interaction term when estimating Specification 1. We drop absolute mobility differences that are particularly imprecisely estimated (standard error > 10). Red circles indicate the median absolute mobility difference for each sending country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

Figure B.12: Country-specific relative mobility estimates across various destination countries

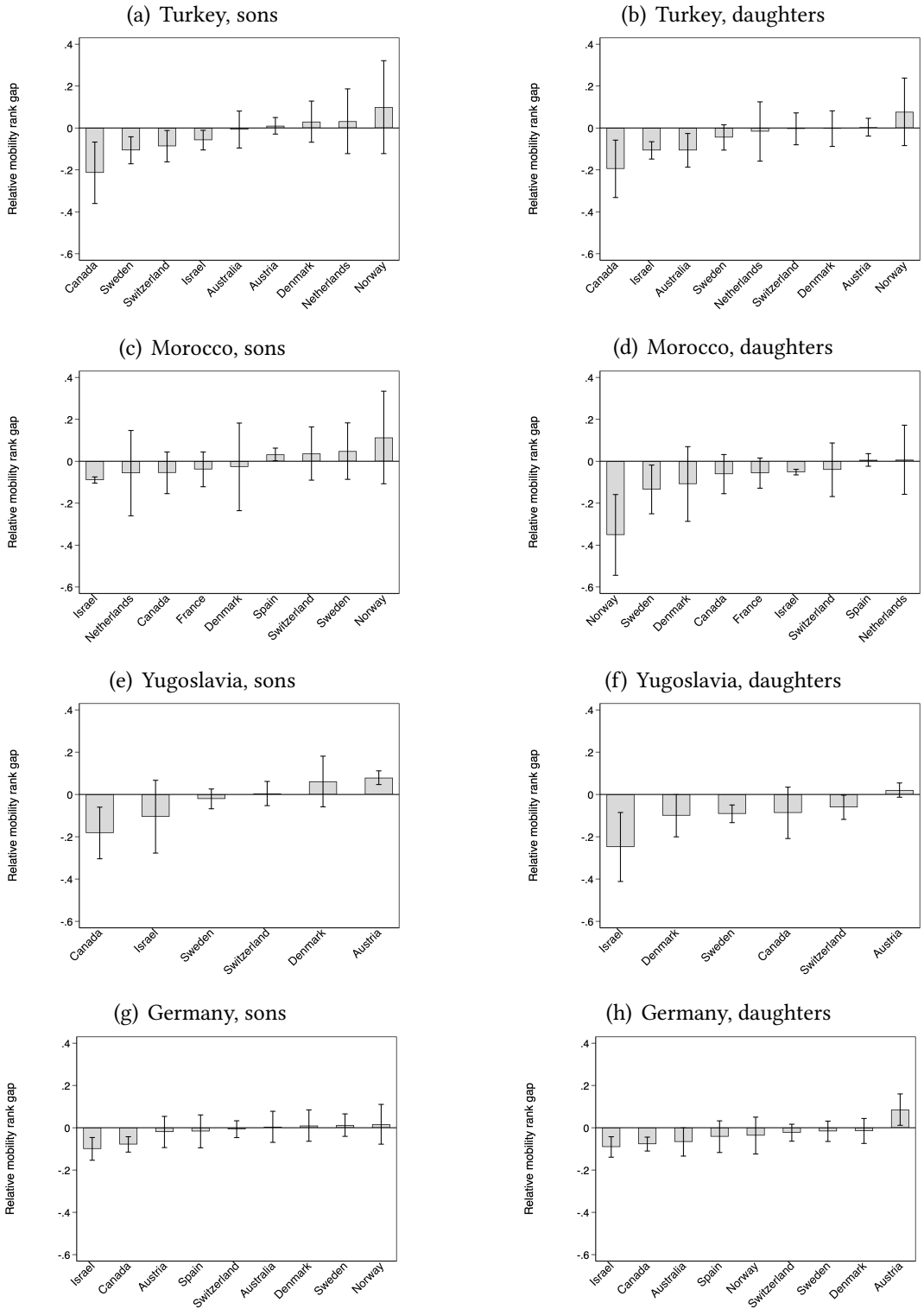
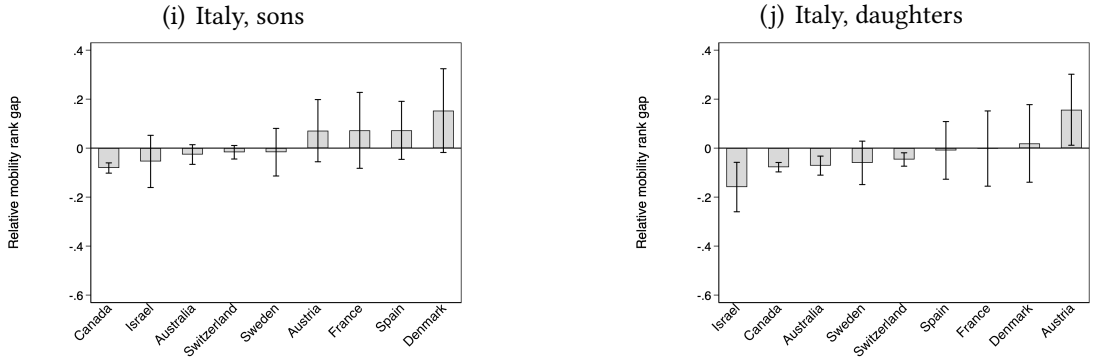
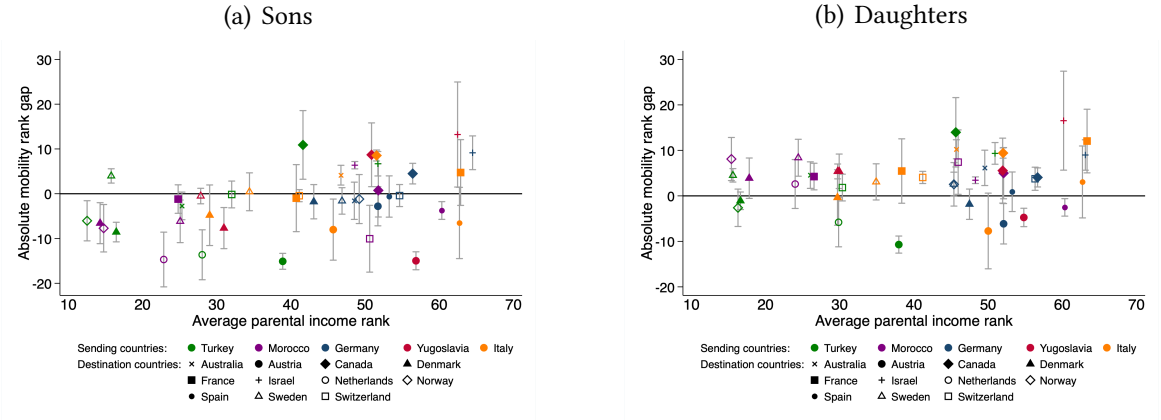


Figure B.12: Country-specific relative mobility estimates across various destination countries (cont.)



Notes: This figure plots estimates of mobility parameters for the sons and daughters of immigrants from Turkey, Morocco, former Yugoslavia, and Turkey. To obtain estimates, we replace the migrant-parent dummy and interaction term with a sending country-specific dummy and interaction term in Specification 1. Each panel refers to one sending country, and the bars refer to the gap in relative mobility when compared to children of locals in the destination country indicated on the x-axis. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

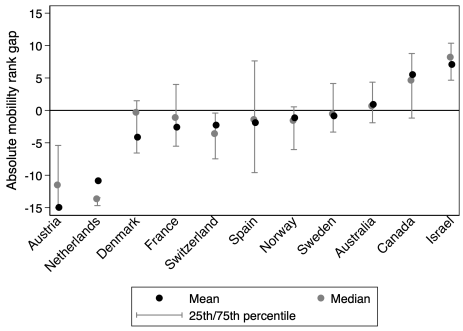
Figure B.13: Intergenerational mobility by sending countries and average parental income rank



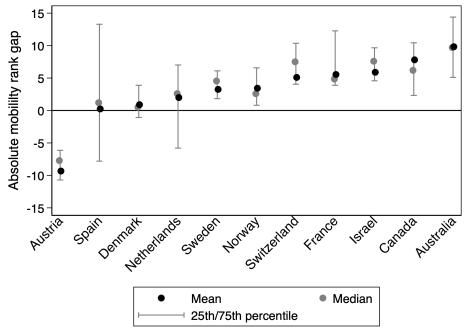
Notes: This figure plots gaps in absolute mobility between children of immigrants and children of locals for each sending-destination country pair by the average parental income rank for the sending country group in each destination country. Colors indicate sending countries, shapes indicate destination countries. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.14: Intergenerational mobility across sending countries within destination countries

(a) Sons



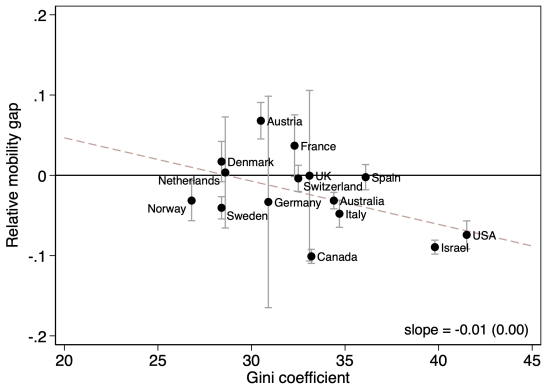
(b) Daughters



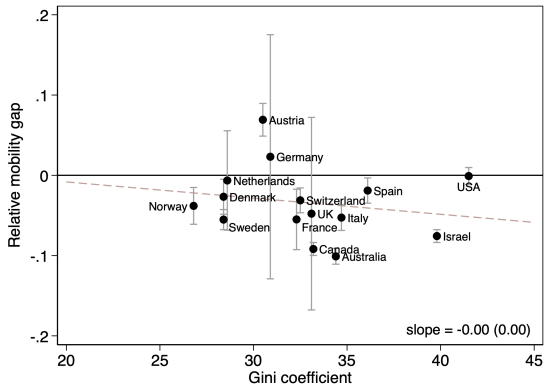
Notes: This figure plots the distribution in gaps in absolute mobility between children of immigrants and children of locals across sending countries within each destination country. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. We limit countries to those with more than three major sending countries. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.15: Association between relative mobility gaps and inequality in destination countries

(a) Relative mobility, sons



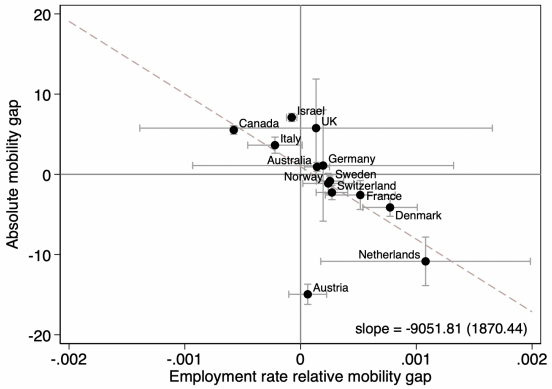
(b) Relative mobility, daughters



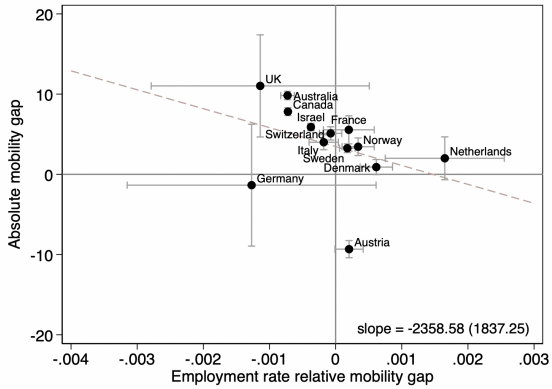
Notes: This figure plots estimates of β_{mp} (relative mobility difference) from Specification 1 for each destination country against their country-level 2014 Gini coefficient (from OECD data explorer: https://data-explorer.oecd.org/). Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.16: Intergenerational relative mobility in income and employment

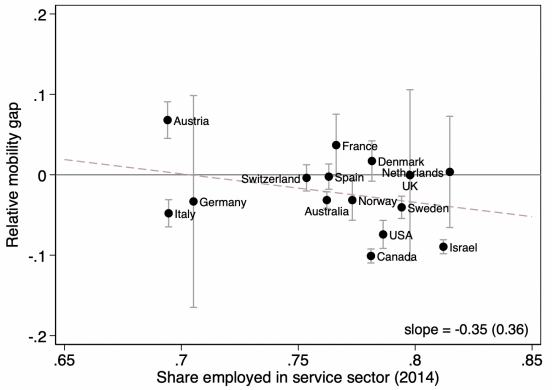
(a) Relative mobility in employment, sons



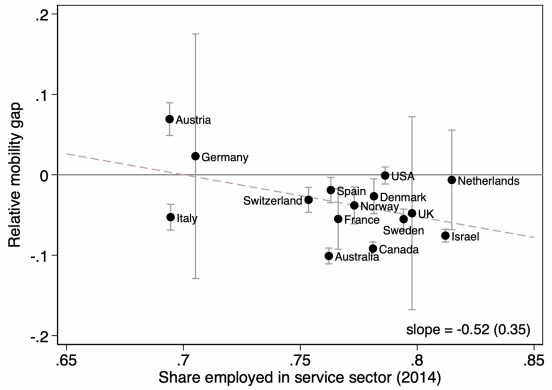
(b) Relative mobility in employment, daughters



(c) Employment in service sector, sons



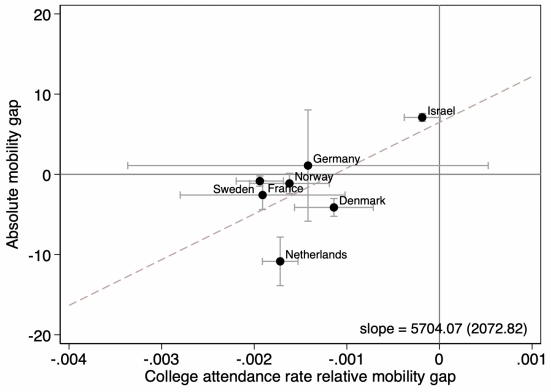
(d) Employment in service sector, daughters



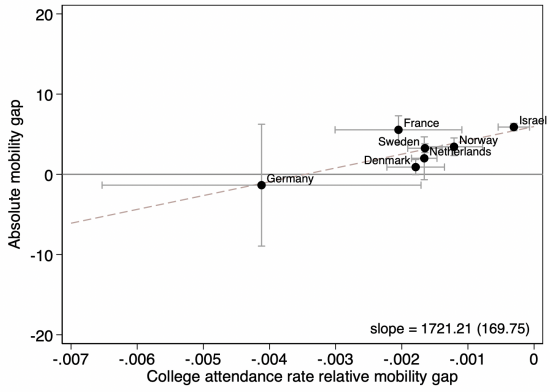
Notes: Panels (a) and (b) plot estimates of Specification 1 with an indicator for child employment as the dependent variable. The β_{mp} estimates, denoting relative mobility in employment rates, are on the x-axis. We plot absolute mobility in terms of income for each country (see Figure 5) on the y-axis. Panels (c) and (d) plot country-level shares of employment in the service sector on the x-axis (from the World Bank, see: https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS). We plot relative mobility in terms of income for each country (see Figure 5) on the y-axis. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

Figure B.17: Intergenerational relative mobility in income and education

(a) Relative mobility, sons



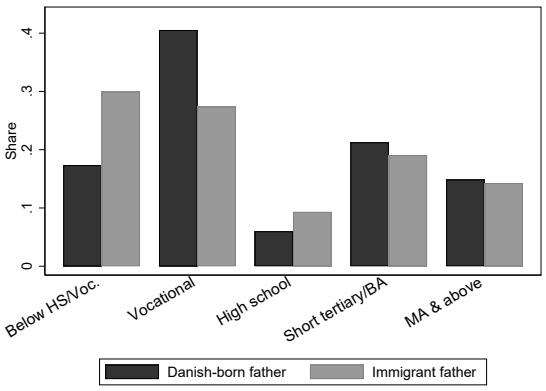
(b) Relative mobility, daughters



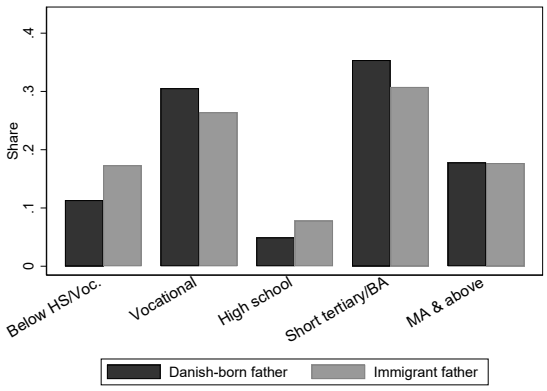
Notes: This figure plots estimates of Specification 1 with an indicator for college attendance as the dependent variable. The β_{mp} estimates, denoting differences in relative mobility in college attendance, are on the x-axis. On the y-axis, we plot absolute mobility in terms of income for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.18: Education levels in Denmark

(a) Sons



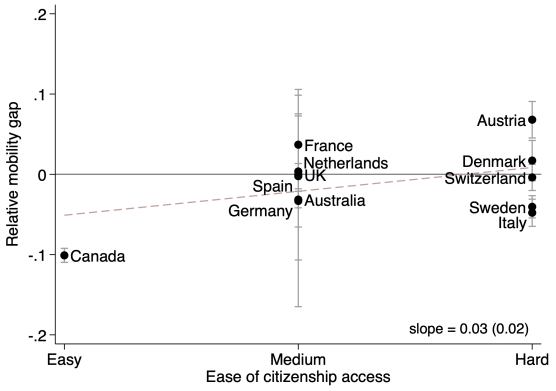
(b) Daughters



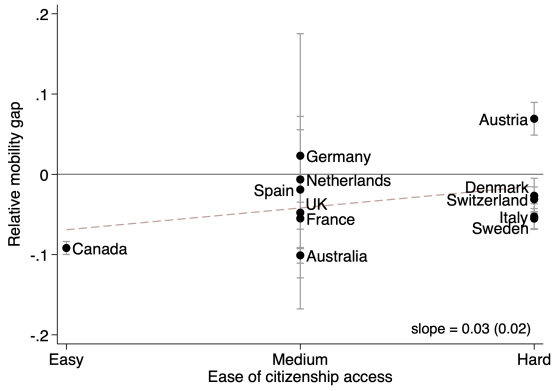
Notes: This figure plots shares of children by education level and parental immigration status. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child education level is measured in 2015. See Appendices A, and C.1 for details on sample construction and on the data from Denmark.

Figure B.19: Intergenerational relative mobility and country characteristics

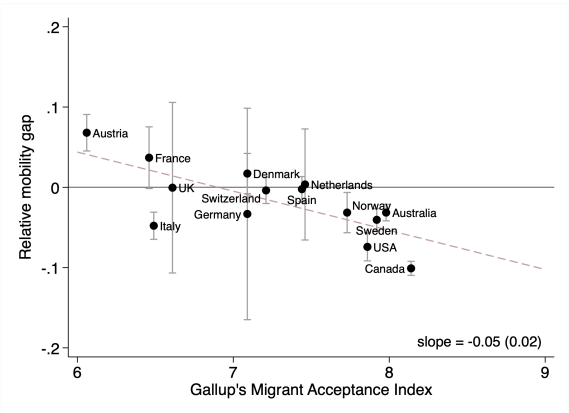
(a) Access to citizenship, sons



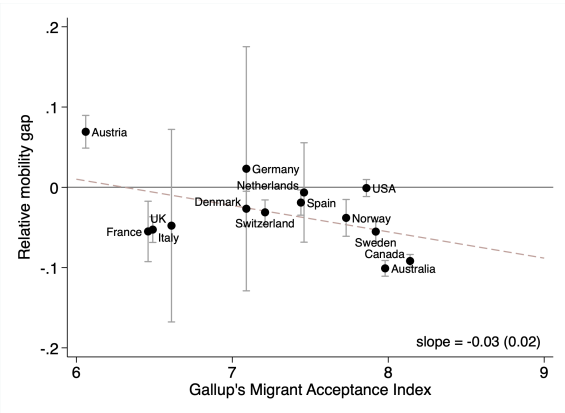
(b) Access to citizenship, daughters



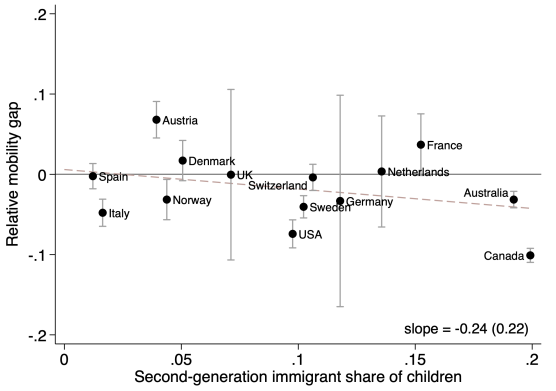
(c) Attitudes towards immigrants, sons



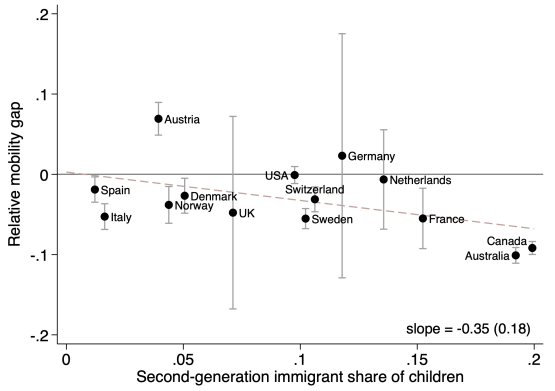
(d) Attitudes towards immigrants, daughters



(e) Share of children of immigrants, sons



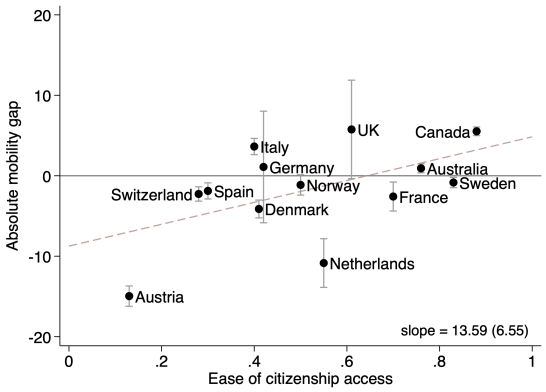
(f) Share of children of immigrants, daughters



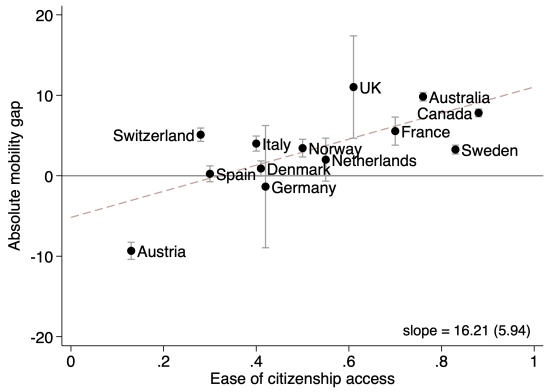
Notes: This figure plots relative mobility gaps in terms of income against various characteristics against for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. Ease of access to citizenship is from the CITLAW Indicators, see Honohan et al. (2017); we show the same correlations using ease of access to citizenship measures from MIPEX in Figure B.20. Attitudes towards immigrants are from Gallup's Migrant Acceptance Index, see: https://news.gallup.com/poll/216377/new-index-shows-least-accepting-countries-migrants.aspx and https://news.gallup.com/poll/233147/migrant-acceptance-canada-follows-political-lines.aspx. Shares of children of immigrants are calculated using our primary datasets as described in Section 3; for the US, we calculate this share from the Current Population Survey. 95% confidence intervals indicated.

Figure B.20: Access to citizenship from the Migrant Integration Policy Index 2020

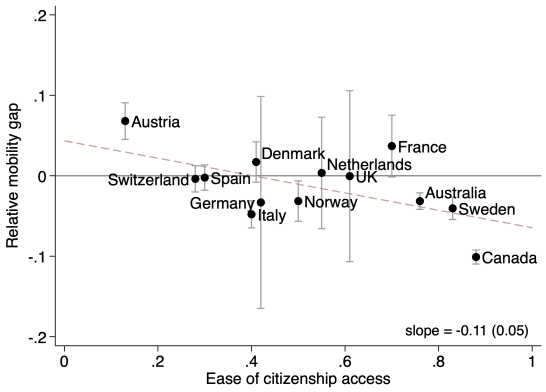
(a) Absolute mobility gaps, sons



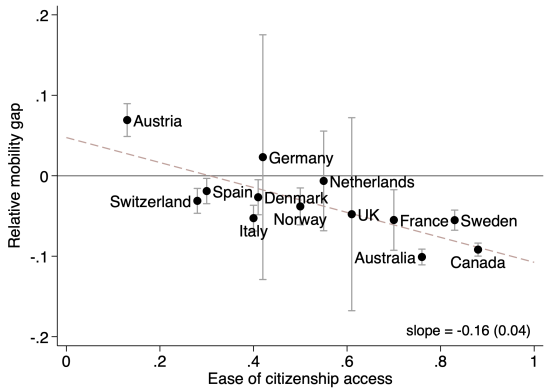
(b) Absolute mobility gaps, daughters



(c) Relative mobility gaps, sons



(d) Relative mobility gaps, daughters

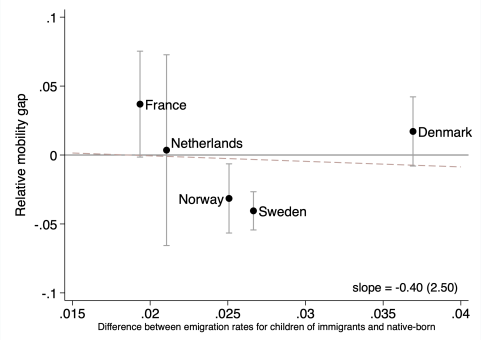


Notes: This figure plots absolute and relative mobility gaps against ease of access to citizenship for each destination country. Ease of access to citizenship is from the Migrant Integration Policy Index 2020, see https://www.mipex.eu/access-nationality. Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

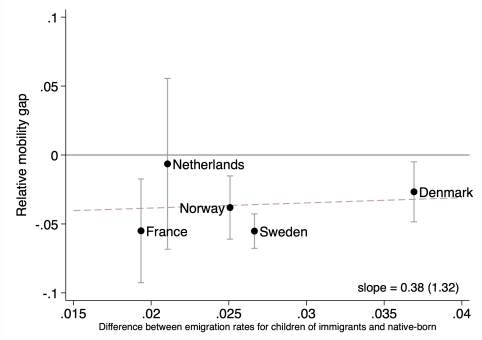
B.4 Robustness

Figure B.21: Intergenerational relative mobility and emigration

(a) Sons



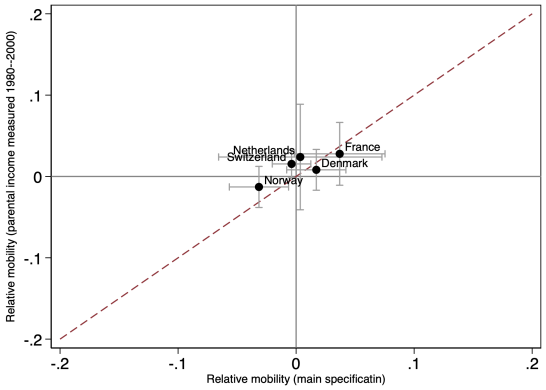
(b) Daughters



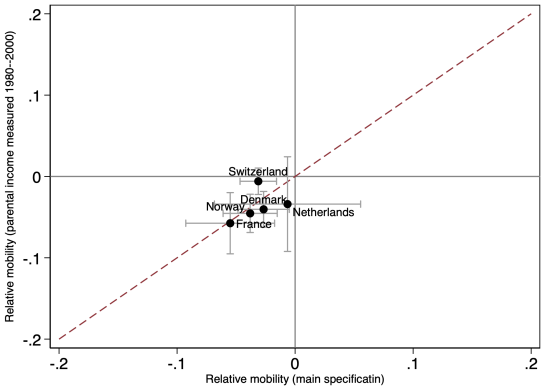
Notes: This figure plots relative mobility gaps in terms of income against differences in emigration rates between children of immigrants and children of locals for each country (see Figure 5). Children are born in 1978-1983. Immigration status is determined by father's country of birth. Child income is measured in 2014-2015, and parental income in 1994-2000. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.22: Alternative child cohorts and parental income measures, relative mobility

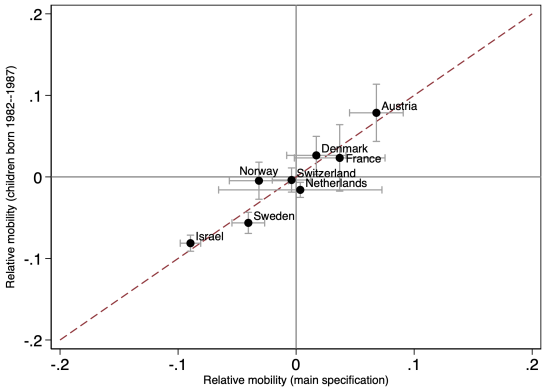
(a) Parental income 1980-2000, sons



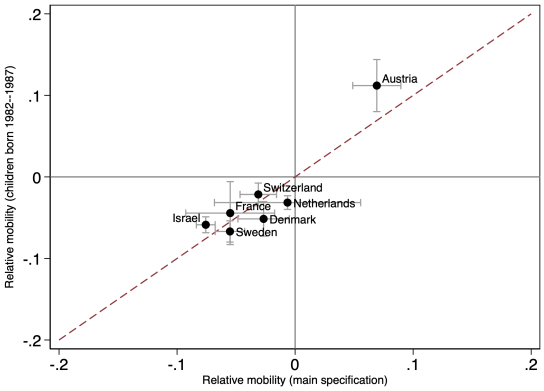
(b) Parental income 1980-2000, daughters



(c) Child cohorts 1982-1987, sons



(d) Child cohorts 1982-1987, daughters

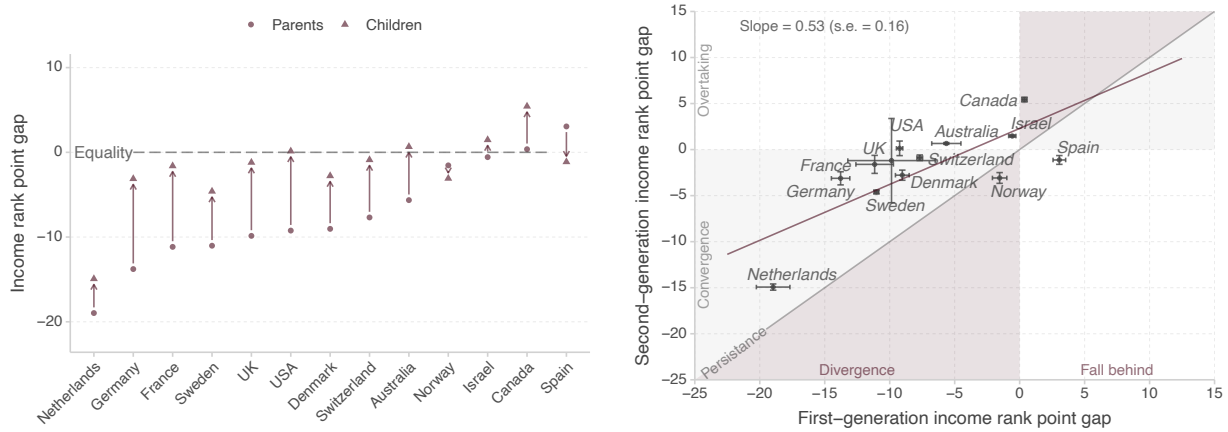


Notes: This figure plots estimates of β_{mp} (relative mobility difference) from Specification 1 for each destination country. Immigration status is determined by father's country of birth. Children are born in 1978-1983 (and 1982-1987 in panels (c) and (d)). Child income is measured in 2014-2015, and parental income in 1994-2000 (and 1980-2000 in panels (a) and (b)). Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country.

Figure B.23: Cross-sectional data on men: Comparing income rank gaps for first- and second-generation

(a) Income rank gaps between immigrants and the local-born

(b) Pattern of convergence across countries



Notes: This figure reports the mean difference in income ranks between immigrants and the local born as well as between their children. In panel (b), we mark the 45-degree line, which represents complete persistence, in gray, and report the estimated regression line in red. Immigration status is determined by father's country of birth. Sample includes men aged 30-50, fathers are observed in 1980 and sons in 2010. Income ranks, 0-100, are determined within cohorts. See Appendices A and C for details on sample construction and on the data from each country. 95% confidence intervals indicated.

C Country-specific details & results

C.1 Country-specific details & results: Denmark (benchmark country)

C.1.1 Data details and deviations

We rely on a number of administrative registers supplied by Statistics Denmark to construct the relevant datasets on children and parents (Statistics Denmark, 2020). The administrative registers provide information on the full Danish population from people are 0 to 70 years old. Researchers and their research assistants are allowed to use these data if their research project is approved by Statistics Denmark and if they are affiliated with a research institution approved by Statistics Denmark. Guidance on how to access the data are provided by Statistics Denmark here: https://www.dst.dk/en/TilSalg/Forskningsservice

C.1.1.1 Cross-sectional data

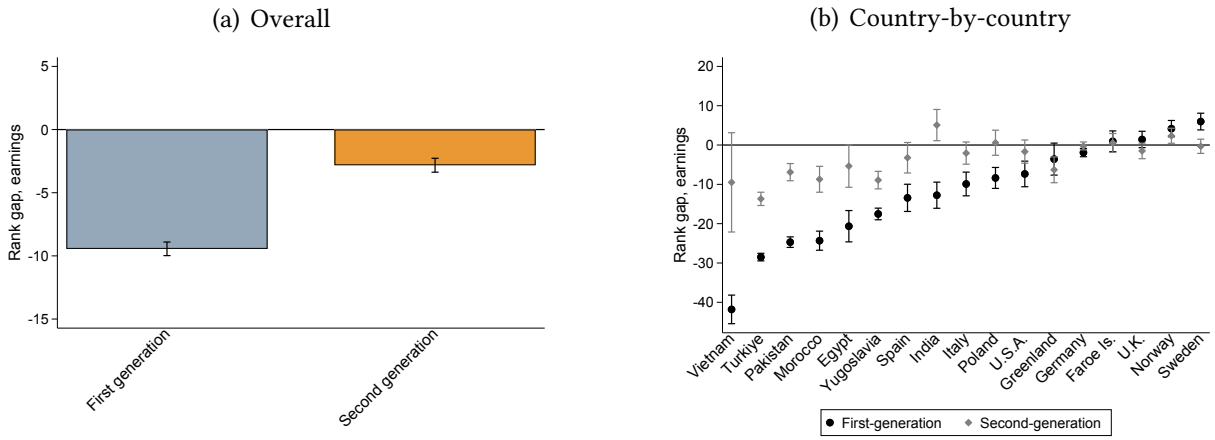
We use 1980-data from the FAIN-register to identify men, parental status (any children present in the population), and age. The measure of paternal total income is from the 1980 IND-register (PERINDKIALT). We use 2010-data from the BEF-register to identify sons and their age. The measure of sons' total income is from the 2010 IND-register (PERINDKIALT_13). Countries of birth of both fathers and sons are determined from FAIN/FABE- and BEF-data spanning 1980-2018.

C.1.1.2 Linked data

We use 2014- and 2015-data from the AKM-register to identify people who are fully tax liable in Denmark. 2014- and 2015-data from the BEF-register provides year of birth, parental IDs, and information on legal sex on children. Total income child income from 2014-2015 and parental income from 1994-2000 is from the IND-register (PERINDKIALT_13). Countries of birth of both fathers and children are determined from FAIN/FABE- and BEF-data spanning 1980-2018. School grades are obtained from the UDFK-register, college enrolment from the KOTRE-register, and highest level of education from the UDDA-register.

C.1.2 Cross-sectional results

Figure C.1.1: Cross-sectional results using earnings: Denmark, 1980-2010 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1980 and 2010 respectively. We use measures of earnings for both generations. Panel a) includes a non-DK dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.1.1: Cross-sectional data: Summary statistics, Denmark

Fathers: 1980 cohort

	Immigrants	Danish-born	Diff.	Std. Error
Age	37.991	39.281	1.289***	0.052
Rank gap, total income	41.194	50.226	9.031***	0.255
Rank gap, earnings	40.795	50.236	9.441***	0.255
ln(total income)	11.640	11.770	0.130***	0.005
ln(earnings)	11.473	11.658	0.185***	0.006
Total income > 0	0.980	0.993	0.013***	0.001
Earnings > 0	0.906	0.968	0.062***	0.002
Share of population	0.025	0.975		
N	13152	513072		

Sons: 2010 cohort

	Immigrant father	Danish-born father	Diff.	Std. Error
Age	37.169	40.242	3.073***	0.053
Rank gap, total income	47.270	50.050	2.779***	0.263
Rank gap, earnings	47.226	50.050	2.825***	0.263
ln(total income)	12.603	12.752	0.149***	0.007
ln(earnings)	12.596	12.695	0.099***	0.009
Total income > 0	0.985	0.986	0.001	0.001
Earnings > 0	0.848	0.897	0.049***	0.003
Share of population	0.018	0.982		
N	12260	673701		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1980 and 2010 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.1.3 Main results

C.1.3.1 Summary statistics

Table C.1.2: Linked data: Summary statistics, Denmark

Sons

	Immigrant father	Danish-born father	Diff.	Std. Error
Child age	32.501	32.619	0.118***	0.020
Child income rank	46.073	54.433	8.360***	0.350
Child labour force part.	0.839	0.913	0.074***	0.003
Mother's age at child birth	26.803	26.974	0.171***	0.055
Father's age at child birth	30.484	29.762	-0.722***	0.065
Parental income rank	32.330	50.852	18.522***	0.329
Parental wealth rank, 1994	47.198	50.110	2.911***	0.332
Child share of population	0.051	0.949		
N	7971	147875		

Daughters

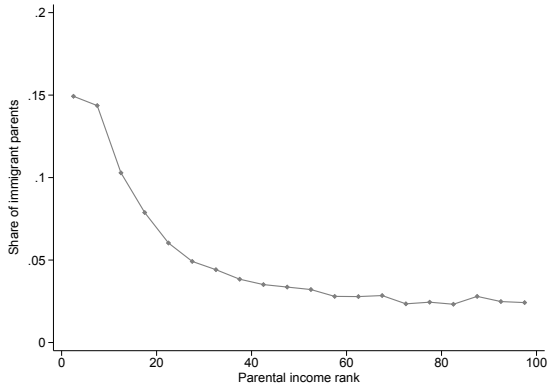
	Immigrant father	Danish-born father	Diff.	Std. Error
Child age	32.505	32.622	0.116***	0.020
Child income rank	41.819	46.085	4.266***	0.312
Child labour force part.	0.821	0.886	0.066***	0.004
Mother's age at child birth	26.547	26.948	0.401***	0.056
Father's age at child birth	30.467	29.753	-0.715***	0.067
Parental income rank	33.241	50.985	17.744***	0.338
Parental wealth rank, 1994	46.928	50.204	3.276***	0.341
Child share of population	0.050	0.950		
N	7561	143666		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income and wealth 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

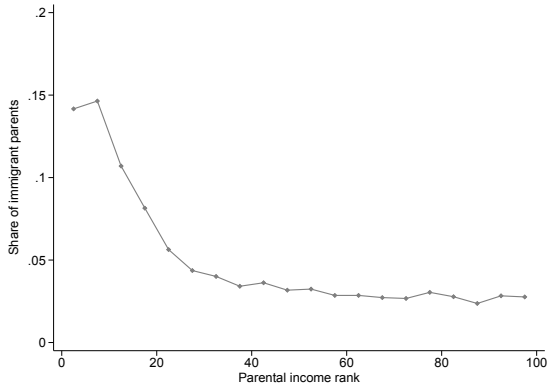
C.1.3.2 Parental income distribution

Figure C.1.2: Linked data: Denmark, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

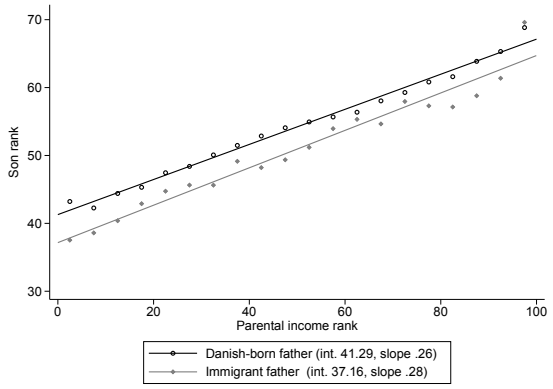


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

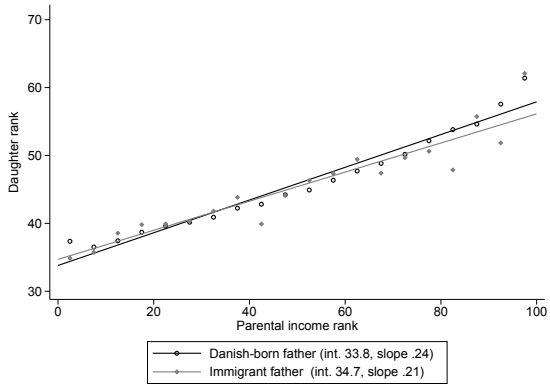
C.1.3.3 Rank-rank relationship

Figure C.1.3: Linked data: Intergenerational mobility, Denmark

(a) Denmark, sons



(b) Denmark, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.1.3: Linked data: Intergenerational mobility estimates, Denmark

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-4.128***	0.900*
	(0.564)	(0.481)
Parents' rank	0.258***	0.241***
	(0.00273)	(0.00241)
Immigrant father # rank	0.0171	-0.0267**
	(0.0128)	(0.0111)
Constant	41.29***	33.80***
	(0.157)	(0.135)
Observations	155,846	151,227
R-squared	0.063	0.068

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.1.3.4 Oaxaca-Blinder decomposition

Table C.1.4: Oaxaca-Blinder decompositions, child income rank, Denmark

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: Immigrant father	46.07***	46.07***	46.07***	41.82***	41.82***	41.82***
	(0.370)	(0.370)	(0.370)	(0.315)	(0.315)	(0.315)
Mean child income rank: No immigrant father	54.43***	54.43***	54.43***	46.09***	46.09***	46.09***
	(0.0788)	(0.0788)	(0.0788)	(0.0696)	(0.0696)	(0.0696)
Difference in means	-8.360***	-8.360***	-8.360***	-4.266***	-4.266***	-4.266***
	(0.378)	(0.378)	(0.378)	(0.323)	(0.323)	(0.323)
Total explained difference	-4.803***	-4.787***	-5.104***	-4.252***	-4.277***	-3.803***
due to differences in parental income distributions	(0.0986)	(0.0989)	(0.250)	(0.0926)	(0.0935)	(0.207)
Total unexplained difference	-3.557***	-3.574***	-3.256***	-0.0140	0.0108	-0.464
due to differences in mobility parameters	(0.370)	(0.370)	(0.435)	(0.317)	(0.316)	(0.377)
- Parental income rank (*relative mobility*)	0.570	0.554	0.872	-0.914**	-0.889**	-1.364**
	(0.428)	(0.415)	(0.653)	(0.381)	(0.371)	(0.568)
- Intercept (*absolute mobility*)	-4.128***	-4.128***	-4.128***	0.900*	0.900*	0.900*
	(0.564)	(0.564)	(0.564)	(0.481)	(0.481)	(0.481)
Observations	155,846	155,846	155,846	151,227	151,227	151,227

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.1.4 Mechanisms

C.1.4.1 Various sets of controls

Table C.1.5: Linked data: Intergenerational mobility estimates with various sets of controls, Denmark

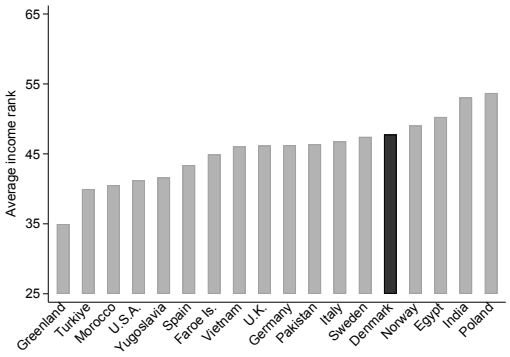
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
VARIABLES	Sons	Sons	Sons	Sons	Sons	Sons	Sons	Sons	Daughters	Daughters	Daughters	Daughters	Daughters	Daughters	Daughters	Daughters
Immigrant father = 1	-4.128***	-3.377***	-2.189***	-2.558***	-1.522***	-1.343**	-0.213	0.363	0.900*	-0.0216	0.685	2.112***	1.956***	2.102***	2.077***	2.450***
	(0.564)	(0.571)	(0.576)	(0.565)	(0.572)	(0.573)	(0.575)	(0.579)	(0.481)	(0.487)	(0.492)	(0.483)	(0.488)	(0.490)	(0.491)	(0.495)
Parents' rank	0.258***	0.267***	0.264***	0.226***	0.215***	0.209***	0.196***	0.195***	0.241***	0.246***	0.241***	0.215***	0.205***	0.195***	0.183***	0.181***
	(0.00273)	(0.00280)	(0.00286)	(0.00284)	(0.00333)	(0.00345)	(0.00342)	(0.00347)	(0.00241)	(0.00248)	(0.00253)	(0.00251)	(0.00295)	(0.00305)	(0.00303)	(0.00307)
Immigrant father # rank	0.0171	0.0156	0.00418	0.00124	-0.0104	-0.00764	-0.0189	-0.0235*	-0.0267**	-0.0161	-0.0231**	-0.0387***	-0.0365***	-0.0370***	-0.0388***	-0.0427***
	(0.0128)	(0.0129)	(0.0129)	(0.0128)	(0.0129)	(0.0129)	(0.0129)	(0.0129)	(0.0111)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)	(0.0112)
Constant	41.29***	41.26***	35.19***	46.56***	33.91***	34.08***	39.15***	35.08***	33.80***	33.59***	31.93***	38.51***	29.85***	30.09***	34.02***	33.51***
	(0.157)	(0.249)	(0.377)	(0.381)	(0.299)	(0.300)	(0.515)	(0.584)	(0.135)	(0.217)	(0.335)	(0.334)	(0.252)	(0.253)	(0.441)	(0.510)
Observations	155,846	155,846	155,846	155,846	155,846	155,846	155,846	155,846	151,227	151,227	151,227	151,227	151,227	151,227	151,227	151,227
R-squared	0.063	0.065	0.070	0.076	0.074	0.079	0.085	0.089	0.068	0.070	0.074	0.081	0.084	0.090	0.094	0.097
Parental region	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0
Parental municipality	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
Parental wealth	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1
Parental industry, 27 grp.	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1
Parental industry, 3-digit	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1994 and included as fixed effects. We have 5 regions and 99 municipalities. Parental industries include categories for unknown industry as well as no industry (if not working). Parental wealth FEs are included as ventiles. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

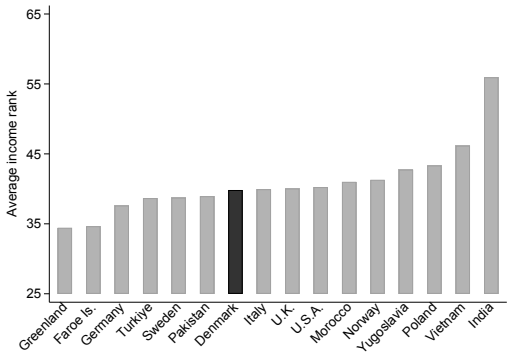
C.1.4.2 Heterogeneity across sending countries

Figure C.1.4: Average income at 25th percentile: Denmark

(a) Sons



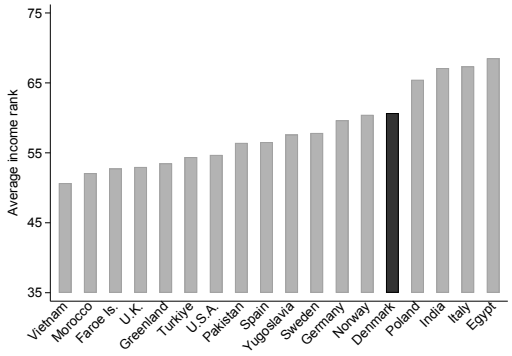
(b) Daughters



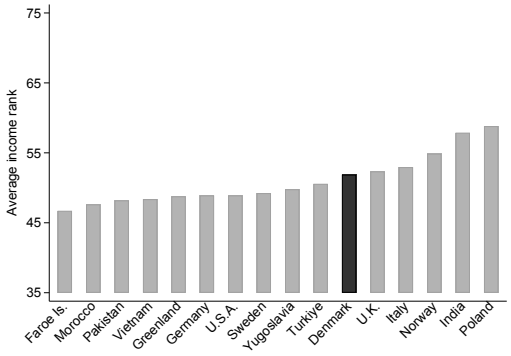
Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.1.5: Average income at 75th percentile: Denmark

(a) Sons



(b) Daughters



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.1.4.3 Employment

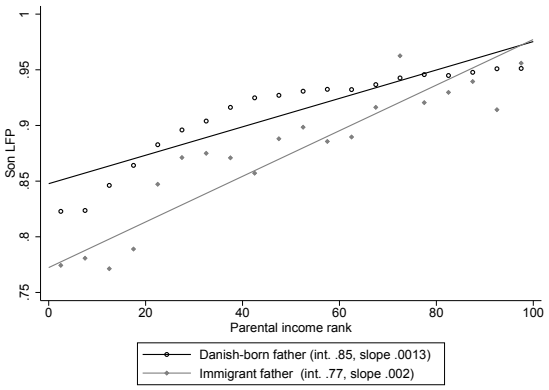
Table C.1.6: Linked data: Intergenerational mobility estimates, employment, Denmark

	(1)	(2)
VARIABLES	Sons	Daughters
Immigrant father = 1	-0.0754***	-0.0574***
	(0.00649)	(0.00692)
Parents' rank	0.00128***	0.00163***
	(2.54e-05)	(2.82e-05)
Immigrant father # rank	0.000773***	0.000615***
	(0.000120)	(0.000125)
Constant	0.848***	0.803***
	(0.00166)	(0.00186)
Observations	155,846	151,227
R-squared	0.023	0.028

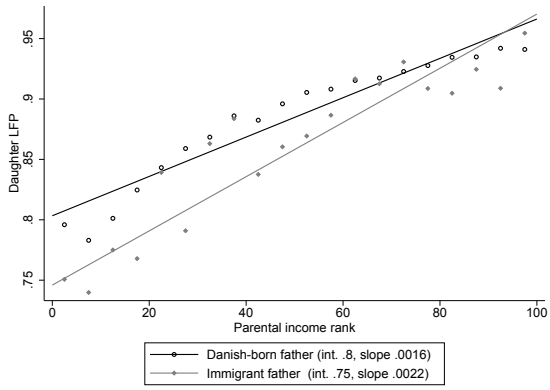
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.1.6: Linked data: Intergenerational mobility, employment, Denmark

(a) Denmark, sons



(b) Denmark, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.1.4.4 Educational mobility

Because gaps in child income ranks may be due to both labour market conditions and due to differences in educational mobility, we now consider educational outcomes. Because labour market

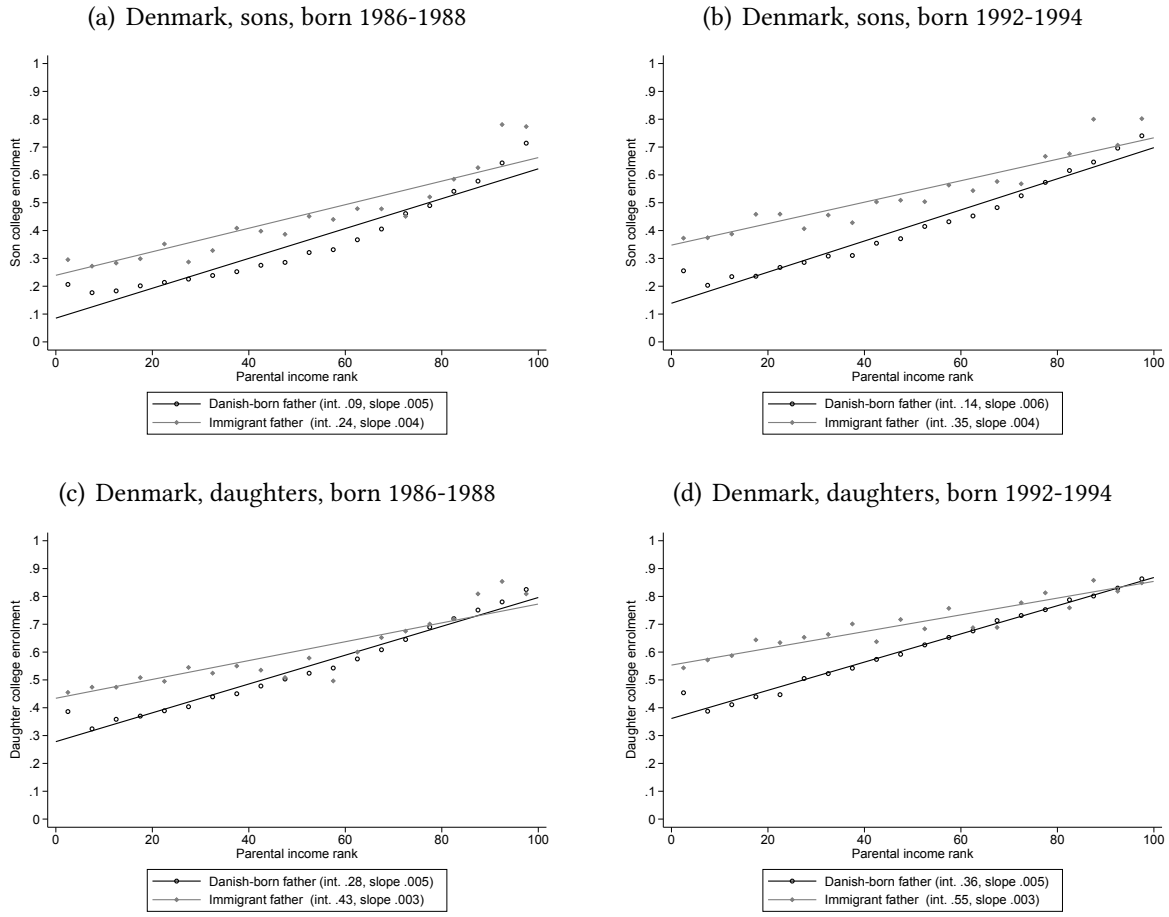
outcomes are only appropriately measured when children are sufficiently old, considering educational outcomes will also allow us to better understand the trajectories of more recent birth cohorts.

We first consider college enrolment (measured as any college enrolment prior to or in the calendar year a child turns 25), and next, primary school grades (children typically finish school at age 16 in Denmark). We want to consider both educational outcomes together for our initial 1980s-cohort, so we start with considering children born in 1986 as they are the first children for whom we observe primary school grades in Denmark.

College enrolment

First, we measure if a child has ever been enrolled in college by the end of the calendar year in which they turn 25. Because the last calendar year want to include in our analysis is 2019 (due to the COVID-19 pandemic), the last birth cohort we consider are those born in 1994. Next, we see how the probability of college enrolment relate to parental income rank for children with local-born fathers vs. immigrant fathers. We compare the outcomes of the more recent birth cohorts to those born in the 1980s. Figure C.1.7 shows the result of this exercise. We see that the level of absolute mobility is higher for children with immigrant fathers, and that the level of absolute mobility has increased over time. In contrast, the relative mobility appears to be stable across the two cohorts, and that is the case for both children with and without immigrant fathers.

Figure C.1.7: Linked data: College enrolment by age 25, Denmark, comparison across cohorts



Notes: This figure plots estimates of Specification 1, regressing an indicator of college enrolment in the year the children turn 25 or earlier on the income rank of parents. Children born in 1986-1988 and 1992-1994 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2003-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

Primary school grades

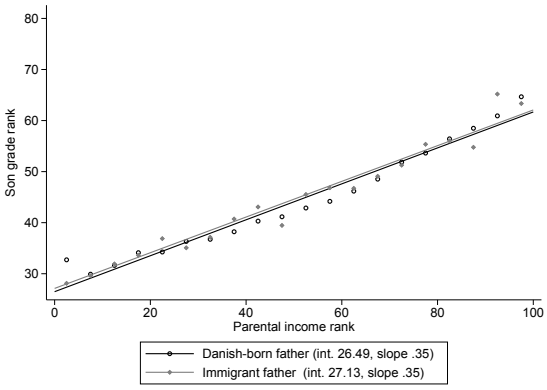
The most recent cohorts we consider are children born in the early 2000s. We consider each child's average grade from primary school, which ends when children are approximately 16 years old in Denmark. The average includes grades from all primary school subjects. Similarly to when we consider child income, we can construct grade ranks within cohorts for the children of interest.[47] Again, we compare the outcomes of children from more recent birth cohorts with those born in the 1980s. Figure C.1.8 shows the result of this exercise. We see that in the early cohorts (born 1986-1988), the relationship between parental income rank and child grade rank is very similar for children with and without immigrant fathers. In the later cohorts (born 2000-2003), the level of absolute mobility is slightly higher for both sons and daughters with immigrant fathers when

[47] Note here that ranking may not be optimal for measures of grades in your country if the grades are sufficiently coarse or measured infrequently. If the Danish case is not representative of the data from your country, we are more than happy to discuss this further with you.

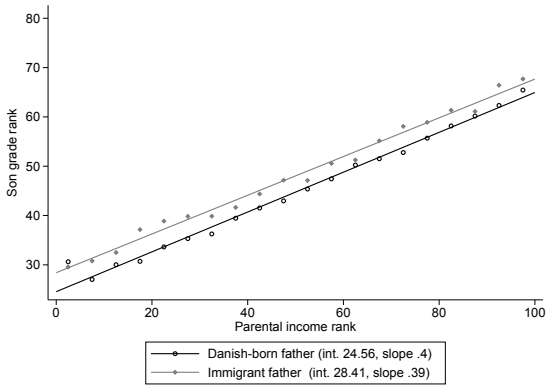
compared to children with local-born fathers. The level of relative mobility, however, remains similar between the two groups of children.

Figure C.1.8: Linked data: Primary school grades, Denmark, comparison across cohorts

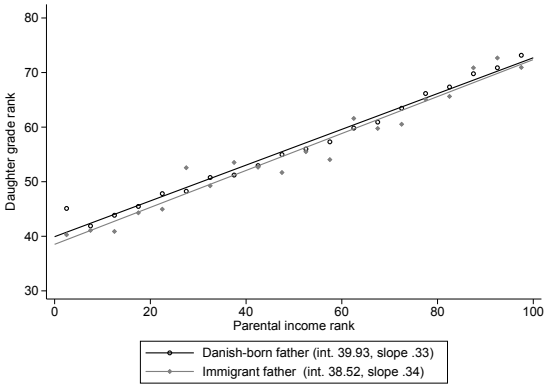
(a) Denmark, sons, born 1986-1988



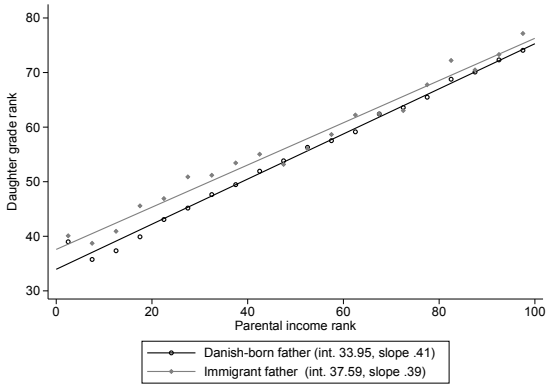
(b) Denmark, sons, born 2000-2002



(c) Denmark, daughters, born 1986-1988



(d) Denmark, daughters, born 2000-2002

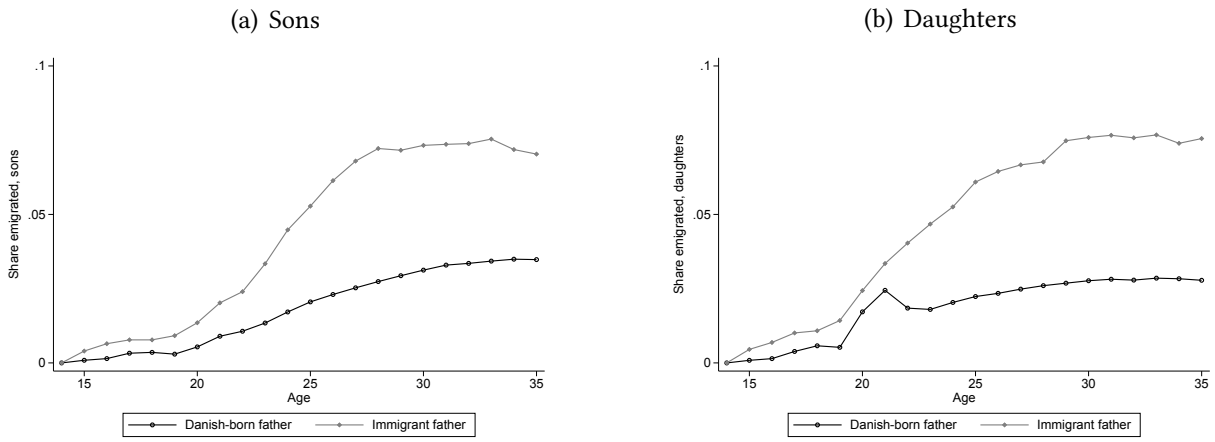


Notes: This figure plots estimates of Specification 1, regressing the average primary school grade ranks of sons/daughters on the income rank of parents. If children have not completed school by age 17, they are assigned the lowest possible grade. Children born in 1986-1988 and 2000-2002 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2011-2017 respectively. Parental income ranks, 0-100, are determined within cohorts.

C.1.5 Robustness

C.1.5.1 Emigration

Figure C.1.9: Denmark, cumulative share of emigrated children

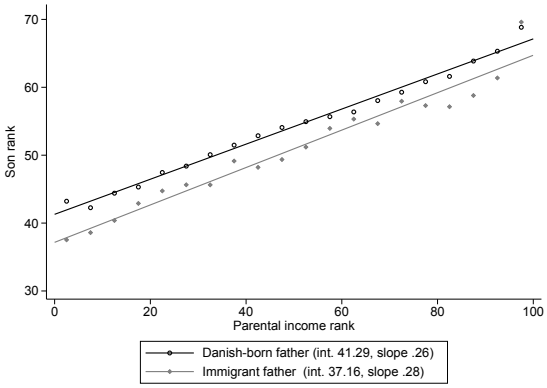


Notes: This figure shows the share of children who have emigrated (i.e. no longer living in Denmark) across age groups. We consider all children who were part of the Danish population at age 14 and calculate the share of emigrated children as they age. If children move back to Denmark after a period abroad, they are no longer counted as emigrants. Children born in 1978-1983. Immigration status is determined by father's country of birth.

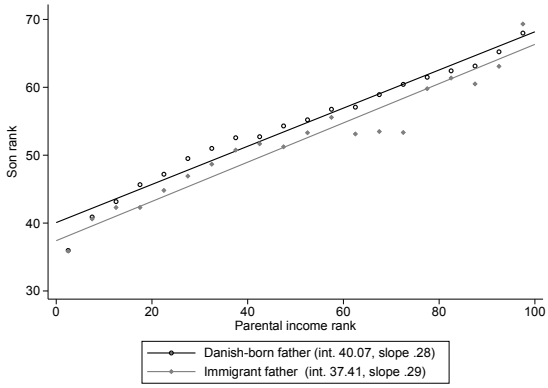
C.1.5.2 Additional years of parental income data

Figure C.1.10: Intergenerational mobility: Denmark by number of years of parental income data

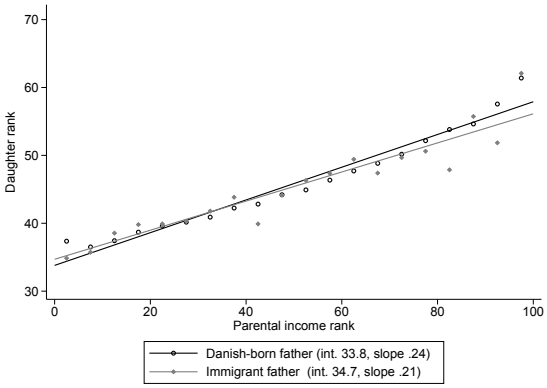
(a) Sons, parental income 1994-2000



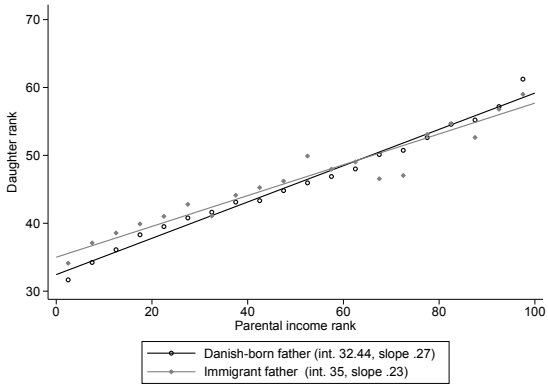
(b) Sons, parental income 1980-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1980-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1980-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.1.7: Intergenerational mobility estimates: Denmark, parental income 1980-2000

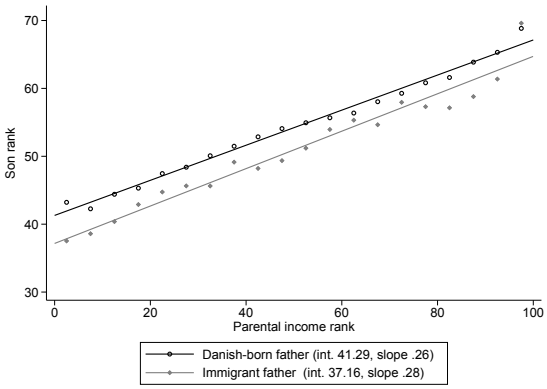
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-2.667***	2.559***
	(0.537)	(0.454)
Parents' rank	0.281***	0.267***
	(0.00271)	(0.00237)
Immigrant father # rank	0.00814	-0.0404***
	(0.0128)	(0.0112)
Constant	40.07***	32.44***
	(0.155)	(0.131)
Observations	156,081	151,456
R-squared	0.073	0.083

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1980-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

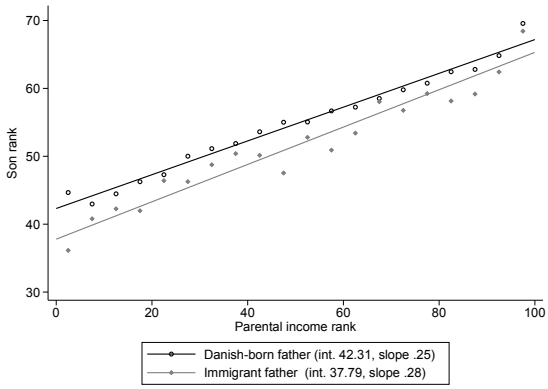
C.1.5.3 More recent birth cohorts, income rank

Figure C.1.11: Linked data: Intergenerational mobility, Denmark, comparison across cohorts

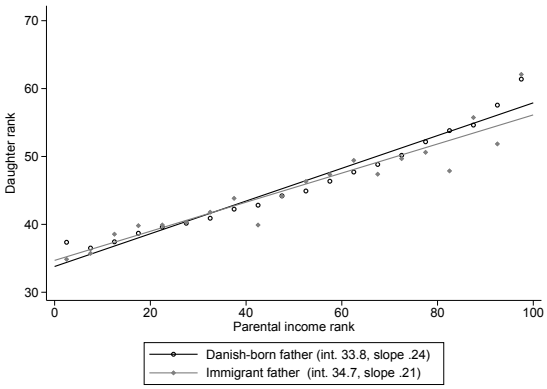
(a) Denmark, sons, born 1978-1983



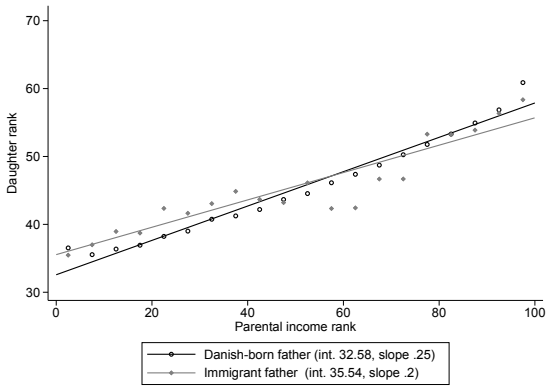
(b) Denmark, sons, born 1982-1987



(c) Denmark, daughters, born 1978-1983



(d) Denmark, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.1.8: Linked data: Intergenerational mobility estimates, Denmark, comparing cohorts

	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-4.128***	0.900*	-4.517***	2.967***
	(0.564)	(0.481)	(0.516)	(0.454)
Parents' rank	0.258***	0.241***	0.249***	0.253***
	(0.00273)	(0.00241)	(0.00279)	(0.00247)
Immigrant father # rank	0.0171	-0.0267**	0.0264**	-0.0515***
	(0.0128)	(0.0111)	(0.0119)	(0.0108)
Constant	41.29***	33.80***	42.31***	32.58***
	(0.157)	(0.135)	(0.162)	(0.138)
Observations	155,846	151,227	150,417	145,135
R-squared	0.063	0.068	0.060	0.074

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.2 Country-specific details & results: Australia

C.2.1 Data details and deviations

We rely on the Person Level Integrated Data Asset (PLIDA) supplied by the Australian Bureau of Statistics to construct the relevant datasets on children and parents (Person-Level Integrated Data Asset (PLIDA), 2016).[48] PLIDA is a secure data asset combining information on health, education, government payments, income and taxation, employment, and population demographics over time.[49] PLIDA was established in 2015 and includes full-population administrative data along with an Australian Census (2006, 2011, 2016 or 2021). A person linkage spine allows for links between these datasets.

Population Census. The Australian Census is collected every five years. The 2016 Census is used to identify all children born between 1989-1992. This data contains self-reported information on legal gender, year of birth, country of birth and the parents' country of birth.

Combined demographics and locations data. We use data from PLIDA's combined demographics file to fill in missing demographic information from the 2016 Census. PLIDA's combined locations data from 2006 to 2007 inclusive is used in the parent-child linking process via common and overlapping place of residence. This is also used to capture the parents place of residence. Unlike the Danish case, parents' place of residence is captured for last year of income data (2006-07) rather than the first. Our measure of region is Australian State or Territory and our measure of municipality is the Australian Statistical Geography Standard, Statistical Area Level 4 (SA4).

Tax Data. Tax return data include detailed information on income. It covers all individuals who lodge a tax return with the Australian Tax Office. Individuals are the primary unit of taxation in Australia, and the tax year runs from 1 July to 30 June the following year—hence we reference the financial years when referring to when income is measured. We use this data to measure income for both the first and second generation. Wage and salary earnings are also measured in the Income Tax Return data for 2017-18 to 2018-19 for children.

We use payment summaries data linked with the Australian Bureau of Statistics' Business Longitudinal Analysis Data Environment (BLADE) data to identify the parents' highest-earnings industry they worked in for the last year of income data (2006-07).

[48] Disclaimer: The results of these studies are based, in part, on data supplied to the ABS under the Taxation Administration Act 1953, A New Tax System (Australian Business Number) Act 1999, Australian Border Force Act 2015, Social Security (Administration) Act 1999, A New Tax System (Family Assistance) (Administration) Act 1999, Paid Parental Leave Act 2010 and/or the Student Assistance Act 1973. Such data may only used for the purpose of administering the Census and Statistics Act 1905 or performance of functions of the ABS as set out in section 6 of the Australian Bureau of Statistics Act 1975. No individual information collected under the Census and Statistics Act 1905 is provided back to custodians for administrative or regulatory purposes. Any discussion of data limitations or weaknesses is in the context of using the data for statistical purposes and is not related to the ability of the data to support the Australian Taxation Office, Australian Business Register, Department of Social Services and/or Department of Home Affairs' core operational requirements. Legislative requirements to ensure privacy and secrecy of these data have been followed. For access to PLIDA and/or BLADE data under Section 16A of the ABS Act 1975 or enabled by section 15 of the Census and Statistics (Information Release and Access) Determination 2018, source data are de-identified and so data about specific individuals has not been viewed in conducting this analysis. In accordance with the Census and Statistics Act 1905, results have been treated where necessary to ensure that they are not likely to enable identification of a particular person or organisation.

[49] For more information, see: https://www.abs.gov.au/about/data-services/data-integration/integrated-data/person-level-integrated-data-asset-plida

Data Access. Approved government and non-government researchers, within Australia, are allowed to use these data subject to approval from the Australian Bureau of Statistics. It may involve an access fee. Guidance on how to access the data are provided here: https://www.abs.gov.au/about/data-services/data-integration/access-and-services.

C.2.1.1 Cross-sectional data

For the cross-sectional results, we compare the 1986 and 2016 Census data (Australian Bureau of Statistics, 1986, 2016). The 1981 and 2011 censuses would be more comparable with the Danish case, but the birthplace of the male parent is not available in the 2011 Census.

First-generation sample. We use the 1986 Census one per cent sample to identify fathers with at least one child. Given individual years of age are not available, our analysis uses four age-group categories: 30-34; 35-39; 40-44; and, 45-49.

First-generation migration status. Following the Danish case, immigration status is based on country of birth.

First-generation income. Total income is grouped into eight self-reporting categories (including, missing). Total income is observed in the tax data and includes: salary and wages; overtime; Government allowances, pensions and benefits; interest and dividends; rents received; business or farm income (less operation expenses); superannuation and workers compensation. By definition, all income is greater than zero in the 1986 Census data (limiting the availability to measure the extensive margin). Given the age and income brackets, mid-point income ranks by age-categories are calculated. Wage and salary income is not separately identified in the 1986 Census.

Second-generation sample. We use the 2016 Census full sample frequency data to identify children aged 30 to 50 years old.

Second-generation migration status. Following the Danish case, immigration status is based on child's and father's country of birth.

Second-generation income. Total income is grouped into 16 self-reporting categories (including, missing). Total income includes: salary and wages; Government allowances, pensions, benefits and allowances; interest and dividends; taxable capital gains; and other income less any loss amounts in the financial year. All negative incomes are dropped for 2016. Unlike the Danish case where missing income is treated as zero income, missings are not re-defined as zero - they are "true missings" in Census data. Given the income brackets, mid-point income ranks by age are calculated. Wage and salary income is not separately identified in the 2016 Census.

C.2.1.2 Linked data

Sample definition. The linked data analysis is conducted on individuals born between 1989-1992 in the 2016 Census. The analysis is based on a person-level parent-child linkage using the 2016 Census, combined demographic and locations data in PLIDA. Our cohort of interest is younger than the Danish case as we could not capture parent-child links for those born between 1978-1983. Links may be missing if a child moved out of home at a young age, or lived in group homes where no possible parent could be identified. Observations were dropped if there was no income recorded for both 2017-18 and 2018-19 for the child and/or no combined parental income in the tax data over the 2000-01 to 2006-07 period.

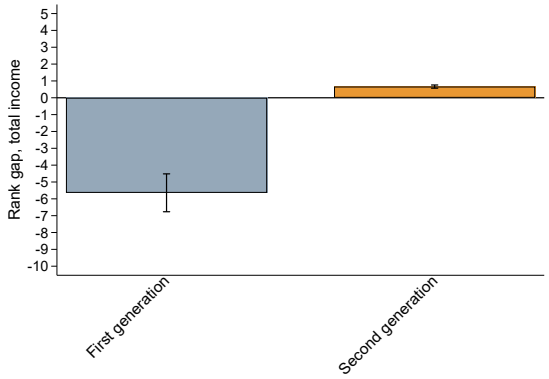
First-generation income. Parent income is measured from 2000-01 to 2006-07. Total income is observed in the tax data and includes: salary and wages; Government allowances; pensions and payments; interest and dividends; taxable capital gains; and other taxable income less any loss amounts in the financial year. Parental income is measured when the children were slightly younger compared to the Danish case. Income is adjusted to 2013 levels using the December quarter consumer price index series from the Australian Bureau of Statistics.

Second-generation income. Child income is measured over 2017-18 and 2018-19 and follows the same definition outlined above. Our children are slightly younger compared to the Danish case.

Immigration status. The 2016 Census and combined demographics data are used to identify child and father's country of origin. Observations were dropped if father's country of origin were missing. This means that single mothers and their children are not included in the sample.

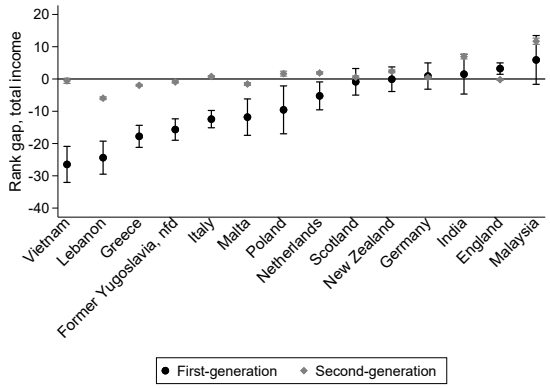
C.2.2 Main results

Figure C.2.1: Cross-sectional results using total income: Australia, 1986-2016 cohort, overall gaps



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the total income and of sons and fathers in 1986 and 2016 respectively, but with a non-Australia dummy rather than country dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-49 (1986) and 30-50 (2016). 95%-confidence interval indicated.

Figure C.2.2: Cross-sectional results using total income: Australia, 1986-2016 cohort, by country



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the total income of sons and fathers in 1986 and 2016 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-49 (1986) and 30-50 (2016). 95%-confidence interval indicated.

Table C.2.1: Cross-sectional data: Summary statistics, Australia

Fathers: 1986 cohort

	Immigrants	Australian-born	Diff.	Std. Error
Age	34-39	34-39		
Rank gap, total income	46.05	51.69	5.64***	0.57
ln(total income(midpoint))	9.81	9.90	0.09***	0.01
Total income > 0	1.00	1.00	0.00	0.00
Share of population	0.26	0.74		
N	3284.00	9445.00		

Sons: 2016 cohort

	Immigrant father	Australian-born father	Diff.	Std. Error
Age	40.14	39.98	-0.17***	0.01
Rank gap, total income	50.64	49.97	-0.66***	0.05
ln(total income(midpoint))	11.10	11.07	-0.03***	0.00
Total income > 0	0.98	0.98	0.00***	0.00
Share of population	0.25	0.75		
N	973245.00	2932439.00		

Notes: This table reports summary statistics of the cross-sectional sample for Australia, including sons and fathers in 1986 and 2016, respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. 1986 data only includes income above zero and ages are grouped into categories. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.2.3 Main results

C.2.3.1 Summary statistics

Table C.2.2: Linked data: Summary statistics, Australia

Sons

	Immigrant father	Australian-born father	Diff.	Std. Error
Child age	27.425	27.492	0.067***	0.006
Child income rank	54.626	56.004	1.378***	0.154
Child labour force part	0.877	0.888	0.011***	0.002
Mother's age at child birth	29.469	28.398	-1.071***	0.028
Father's age at child birth	32.658	30.602	-2.057***	0.030
Parental income rank	45.097	51.080	5.982***	0.152
Child share of population	0.194	0.806		
N	44417.000	184318.000		

Daughters

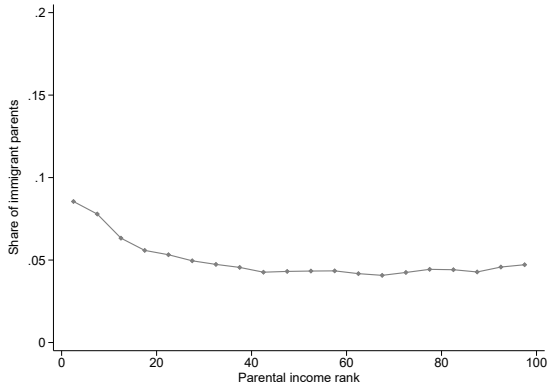
	Immigrant father	Australian-born father	Diff.	Std. Error
Child age	27.417	27.499	0.082***	0.006
Child income rank	47.453	43.579	-3.874***	0.146
Child labour force part	0.896	0.881	-0.015***	0.002
Mother's age at child birth	29.445	28.405	-1.040***	0.029
Father's age at child birth	32.648	30.577	-2.072***	0.031
Parental income rank	45.207	51.246	6.038***	0.153
Child share of population	0.190	0.810		
N	43684.000	186165.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1989-1992. Immigration status is determined by father's country of birth. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

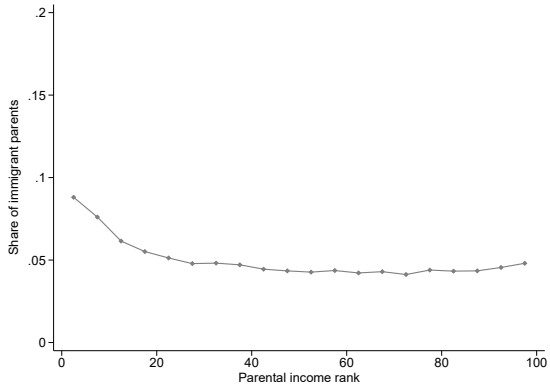
C.2.3.2 Parental income distribution

Figure C.2.3: Linked data: Australia, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

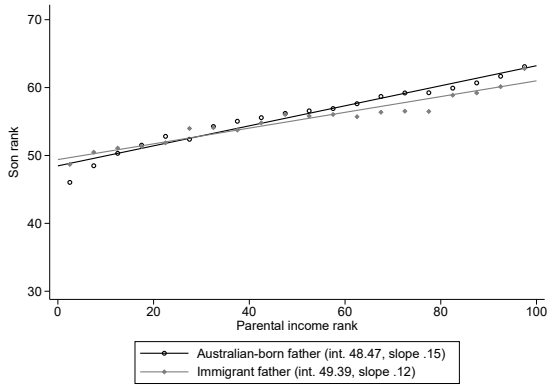


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1989-1992. Immigration status is determined by father's country of birth. Parental income measured in 2000-01 to 2006-07. Income ranks, 0-100, determined within child cohorts.

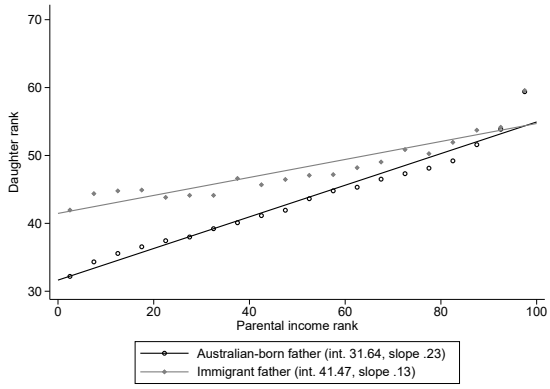
C.2.3.3 Rank-rank relationship

Figure C.2.4: Linked data: Intergenerational mobility, Australia

(a) Australia, sons



(b) Australia, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1989-1992. Immigration status is determined by father's country of birth. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts.

Table C.2.3: Linked data: Intergenerational mobility estimates, Australia

VARIABLES	(1) Sons 1989-1992	(2) Daughters 1989-1992
Immigrant father = 1	0.927***	9.825***
	(0.286)	(0.269)
Parents rank	0.148***	0.233***
	(0.00238)	(0.00219)
Immigrant father # rank	-0.0315***	-0.101***
	(0.00524)	(0.00499)
Constant	48.47***	31.64***
	(0.137)	(0.124)
Observations	228,735	229,849
R-squared	0.020	0.054

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1989-1992. Immigration status is determined by father's country of birth. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.2.3.4 Oaxaca-Blinder decomposition

Table C.2.4: Oaxaca-Blinder decompositions, child income rank, Australia

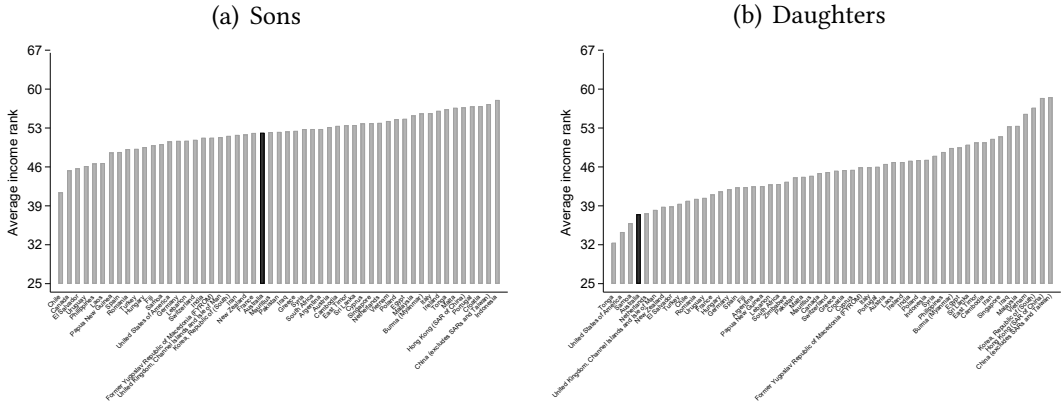
	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	54.63***	54.63***	54.63***	47.45***	47.45***	47.45***
	(0.140)	(0.140)	(0.140)	(0.134)	(0.134)	(0.134)
No immigrant father	56.00***	56.00***	56.00***	43.58***	43.58***	43.58***
	(0.0674)	(0.0674)	(0.0674)	(0.0633)	(0.0633)	(0.0633)
Difference	-1.378***	-1.378***	-1.378***	3.874***	3.874***	3.874***
	(0.156)	(0.156)	(0.156)	(0.148)	(0.148)	(0.148)
Total explained difference	-0.842***	-0.883***	-0.694***	-1.278***	-1.407***	-0.800***
due to differences in parental income distributions	(0.0257)	(0.0274)	(0.0334)	(0.0358)	(0.0394)	(0.0343)
Total unexplained difference	-0.536***	-0.496***	-0.684***	5.153***	5.281***	4.674***
due to differences in mobility parameters	(0.155)	(0.155)	(0.157)	(0.147)	(0.147)	(0.150)
- Parental income rank (*relative mobility*)	-1.463***	-1.422***	-1.611***	-4.673***	-4.545***	-5.152***
	(0.243)	(0.236)	(0.268)	(0.232)	(0.226)	(0.256)
- Intercept (*absolute mobility*)	0.927***	0.927***	0.927***	9.825***	9.825***	9.825***
	(0.286)	(0.286)	(0.286)	(0.269)	(0.269)	(0.269)
Observations	228,735	228,735	228,735	229,849	229,849	229,849

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1989-1992. Immigration status is determined by father's country of birth. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.2.4 Mechanisms

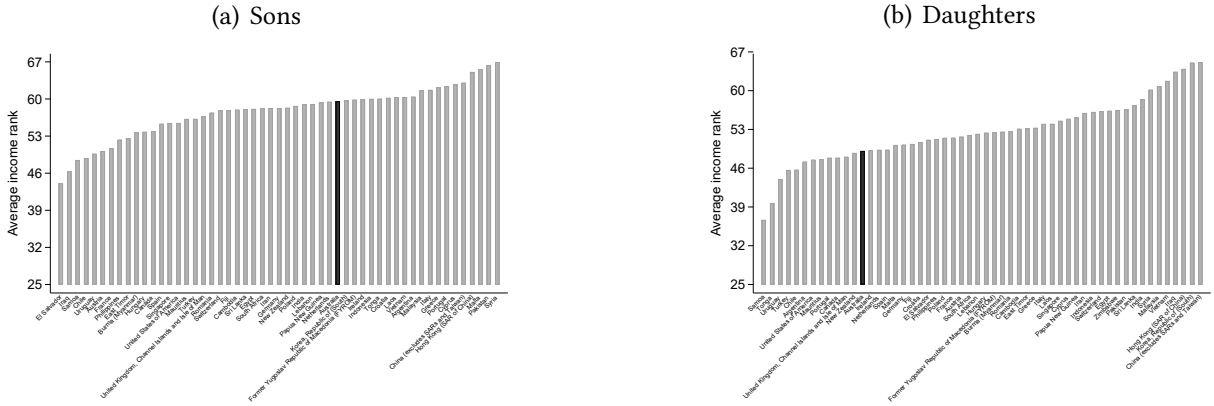
C.2.4.1 Heterogeneity across sending countries

Figure C.2.5: Average income at 25th percentile: Australia



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1989-1992. Immigration status is determined by father's country of birth. All countries that belong to the United Kingdom, are grouped together under the United Kingdom. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts.

Figure C.2.6: Average income at 75th percentile: Australia



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1989-1992. Immigration status is determined by father's country of birth. All countries that belong to the United Kingdom, are grouped together under the United Kingdom. Child income measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts.

C.2.4.2 Employment

Table C.2.5: Linked data: Intergenerational mobility estimates, employment, Australia

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0144***	0.0561***
	(0.00321)	(0.00315)
Parents rank	0.000484***	0.00132***
	(2.52e-05)	(2.61e-05)
Immigrant father # rank	0.000142**	-0.000727***
	(5.53e-05)	(5.26e-05)
Constant	0.864***	0.813***
	(0.00153)	(0.00167)
Observations	228,735	229,849
R-squared	0.003	0.013

Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1989-1992. Immigration status is determined by father's country of birth. Child employment measured in 2017-18 to 2018-19, and parental income 2000-01 to 2006-07. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.2.4.3 Educational mobility

Educational mobility could be measured using Level of Highest Educational Attainment, from the 2016 Census. Unlike the Danish case, we do not know the exact age of attainment.

C.2.5 Robustness

C.2.5.1 Emigration

The Australian data are currently not well set up to examine emigration in this context. Past work with a pseudo-panel of Census data suggests that emigration in Australia is relatively modest Deutscher (2020) perhaps unsurprising given Australia is a long-distance move in the first place with no neighbouring higher income countries.

C.2.5.2 Additional years of parental income data

The Australian income data is not available for years prior to 1999-2000. Parental income could be measured later in life.

C.2.5.3 More recent birth cohorts

The Australian data by necessity is already focused on more recent cohorts—those born between 1989-1992 versus the 1978-83 and 1982-87 cohorts considered in the Danish case.

C.3 Country-specific details & results: Austria

C.3.1 Data details and deviations

We utilize a range of administrative registers available through the *JKU Data Center* to construct the relevant datasets on children and their parents.[50] The primary data source is the *Austrian Social Security Database*, which offers wage information for the entire Austrian workforce dating back to 1972 (Zweimüller et al., 2009). To establish links between parents and children, we utilize additional administrative sources to perform a partially probabilistic matching process. A more detailed description of the data and the matching methodology is provided in Section C.3.1.2.

To the best of our knowledge, this is the only data source in Austria that provides a large-scale match between parents and children, enabling the observation of income for both generations within the age range of 30 to 40. Notably, the newly established *Austrian Micro Data Center*, hosted by *Statistics Austria*, also facilitates matching between parents and children. However, it is limited to more recent birth cohorts and lacks income data prior to 2000.

C.3.1.1 Cross-sectional data

There is no data available for Austria that meets all the requirements of the cross-sectional analysis.

C.3.1.2 Linked data

Income data is sourced from the *Austrian Social Security Database* (henceforth ASSD). To establish links between parents and children, we leverage additional administrative sources, such as coinsurance records.

Linking parents and children While the matching process incorporates a probabilistic component, we ensure that only unique matches are retained. Columns (1) and (2) of Table C.3.6 report the number of births recorded by *Statistics Austria* and those in the micro-level *Austrian Birth Register*, respectively. Column (3) indicates the proportion of children for whom a unique match has been established between their birth records and their entries in the ASSD. Across all birth cohorts, nearly 90% of children can be uniquely matched. The proportion of children for whom a mother can also be uniquely linked in the ASSD is slightly lower, at 88.33%, while the proportion for uniquely matched fathers is significantly lower, at 78.79%. This discrepancy arises because the *Austrian Birth Register* records fathers only in the case of marital births, making it more challenging to identify their fathers in other datasets. For 77.79% of children, both parents can be uniquely matched.

Information on income The ASSD records all events affecting individuals' eligibility for and the amount of their social security benefits in the domains of health, accident, and pension insurance. The calculation of benefit amounts depends on social security contributions, which are

[50] The *JKU Data Center* was established as part of "The Austrian Center for Labor Economics and the Analysis of the Welfare State," a National Research Network (S103) funded by the *Austrian Science Fund*. For more information, see https://www.labornrn.at.

Table C.3.6: Match quality between children and parents

	Number of children/observations					
Cohort	(1) Births according to Statistics Austria	(2) in the micro-level Birthregister	(3) matched in the ASSD	(4) with matched mother	(5) with matched father	(6) with matched m & f
1978	85,402	84,722	67,593	65,915	59,527	57,849
1979	86,388	85,727	74,828	73,202	65,920	64,294
1980	90,872	90,136	79,942	78,531	70,716	69,305
1981	93,942	93,139	83,074	81,908	73,129	71,963
1982	94,840	94,054	83,132	82,200	73,146	72,214
1983	90,118	89,391	80,873	80,148	71,547	70,822
1984	89,234	88,905	82,070	81,629	73,051	72,610
1985	87,440	87,121	80,677	80,315	71,699	71,337
1986	86,964	86,694	80,375	80,078	70,682	70,385
1987	86,503	86,305	79,121	78,880	68,835	68,594
Total	806,301	886,194	791,685	782,806	698,252	689,373
Percent of (2)			89.34%	88.33%	78.79%	77.79%

derived from individuals' annual earnings. As a result, the ASSD includes (imperfect) data on yearly earnings.

The contribution basis, used to calculate social security benefits, is directly tied to an individual's annual earnings. However, this contribution basis is subject to lower and upper limits. Consequently, earnings below the lower boundary are not captured, and earnings above the upper boundary are observed only up to this limit, resulting in right-censoring at the upper tail of the earnings distribution. Importantly, these boundaries vary over time.

Additionally, the dataset provides basic demographic information, including sex and citizenship.

C.3.2 Cross-sectional results

There is no data available for Austria that meets all the requirements of the cross-sectional analysis.

C.3.3 Main results

C.3.3.1 Summary statistics

Table C.3.7: Linked data: Summary statistics, Austria

Sons

	Immigrant father	Austrian-born father	Diff.	Std. Error
Child age	31.924	31.834	-0.090***	0.022
Child income rank	50.962	62.666	11.704***	0.293
Child labour force part.	0.961	0.972	0.011***	0.002
Mother's age at child birth	25.361	24.913	-0.448***	0.062
Father's age at child birth	28.940	28.558	-0.382***	0.068
Parental income rank	48.832	50.070	1.238***	0.326
Child share of population	0.040	0.960		
N	8153.000	195202.000		

Daughters

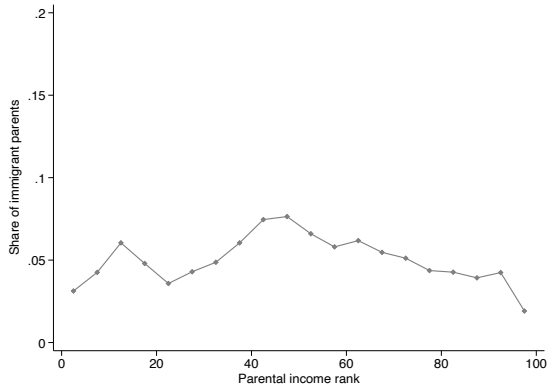
	Immigrant father	Austrian-born father	Diff.	Std. Error
Child age	31.895	31.798	-0.097***	0.023
Child income rank	31.191	37.308	6.116***	0.307
Child labour force part.	0.942	0.945	0.003	0.003
Mother's age at child birth	25.365	24.917	-0.448***	0.064
Father's age at child birth	28.853	28.574	-0.279***	0.071
Parental income rank	48.060	50.056	1.996***	0.342
Child share of population	0.039	0.961		
N	7408.000	184438.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child earnings measured in 2014-2015, and parental earnings 1994-2000. Austrian data does not include wealth variables. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

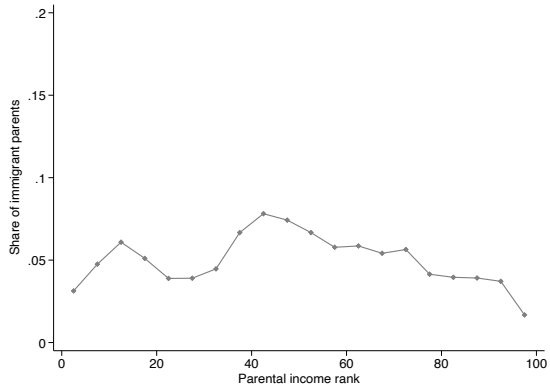
C.3.3.2 Parental income distribution

Figure C.3.7: Linked data: Austria, share of total number of children with immigrant parents

(a) Sons



(b) Daughters

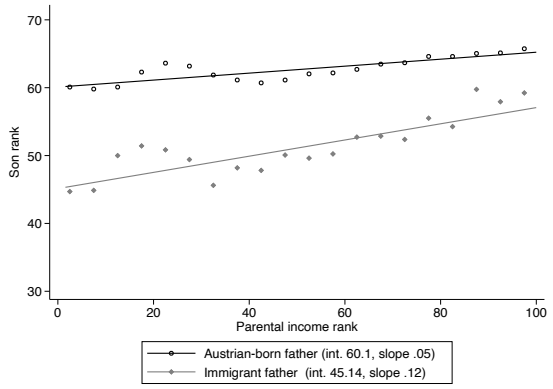


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

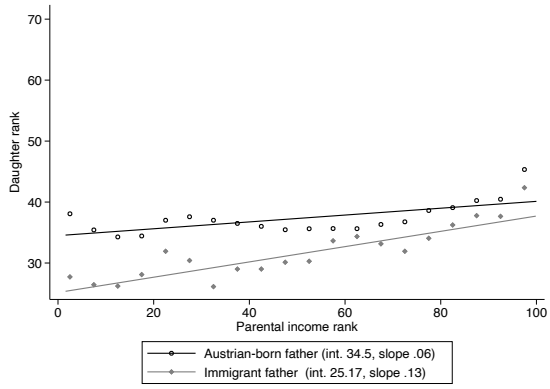
C.3.3.3 Rank-rank relationship

Figure C.3.8: Linked data: Intergenerational mobility, Austria

(a) Austria, sons



(b) Austria, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.3.8: Linked data: Intergenerational mobility estimates, Austria

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-14.96***	-9.330***
	(0.643)	(0.543)
Parents' rank	0.0513***	0.0562***
	(0.00207)	(0.00213)
Immigrant father # rank	0.0680***	0.0692***
	(0.0116)	(0.0104)
Constant	60.10***	34.50***
	(0.119)	(0.121)
Observations	203,355	191,846
R-squared	0.011	0.006

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.3.3.4 Oaxaca-Blinder decomposition

Table C.3.9: Oaxaca-Blinder decompositions, child income rank, Austria

	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	50.96***	50.96***	50.96***	31.19***	31.19***	31.19***
	(0.295)	(0.295)	(0.295)	(0.257)	(0.257)	(0.257)
No immigrant father	62.67***	62.67***	62.67***	37.31***	37.31***	37.31***
	(0.0586)	(0.0586)	(0.0586)	(0.0607)	(0.0607)	(0.0607)
Difference	−11.70***	−11.70***	−11.70***	−6.116***	−6.116***	−6.116***
	(0.300)	(0.301)	(0.301)	(0.264)	(0.264)	(0.264)
Total explained difference	−0.0662***	−0.0635***	−0.148***	−0.116***	−0.112***	−0.250***
due to differences in parental income distributions	(0.0159)	(0.0153)	(0.0378)	(0.0183)	(0.0177)	(0.0434)
Total unexplained difference	−11.64***	−11.64***	−11.56***	−6.000***	−6.004***	−5.866***
due to differences in mobility parameters	(0.299)	(0.299)	(0.299)	(0.262)	(0.262)	(0.264)
- Parental income rank (relative mobility)	3.324	3.321	3.405	3.330	3.326	3.464
	(0.570)	(0.569)	(0.583)	(0.499)	(0.499)	(0.519)
- Intercept (absolute mobility)	-14.961	-14.961	-14.961	-9.330	-9.330	-9.330
	(0.643)	(0.643)	(0.643)	(.543)	(.543)	(.543)
Observations	203,355	203,355	203,355	191,846	191,846	191,846

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.3.4 Mechanisms

C.3.4.1 Various sets of controls

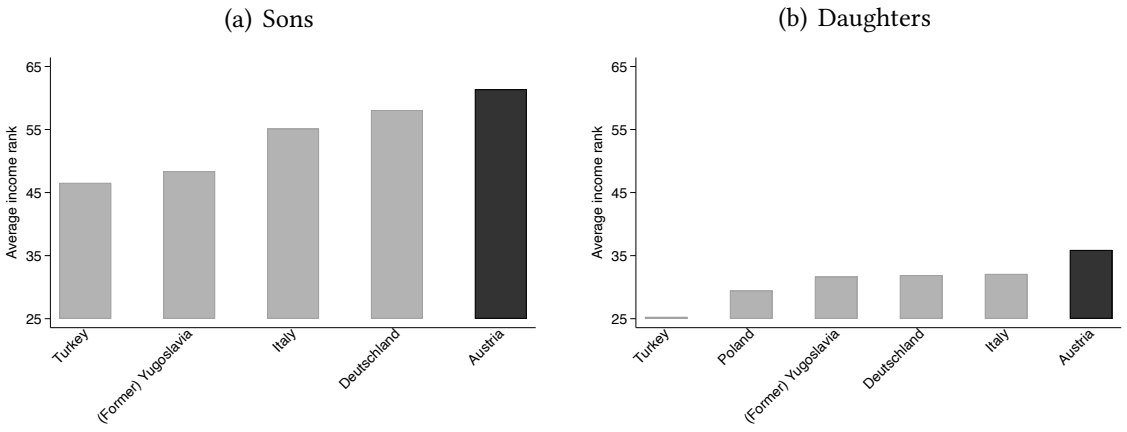
Table C.3.10: Linked data: Intergenerational mobility estimates with various sets of controls, Austria

VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Sons	(8) Sons	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters	(13) Daughters	(14) Daughters	(15) Daughters	(16) Daughters
Immigrant father = 1	-14.96***	-15.03***	-15.00***	-14.96***	-13.68***	-13.21***	-13.56***	-13.37***	-9.330***	-9.246***	-9.217***	-9.330***	-5.662***	-6.981***	-6.027***	-6.240***
	(0.643)	(0.641)	(0.641)	(0.643)	(1.008)	(0.645)	(1.006)	(1.008)	(0.543)	(0.545)	(0.546)	(0.543)	(0.859)	(0.551)	(0.859)	(0.861)
Parents' rank	0.0513***	0.0458***	0.0446***	0.0513***	0.0418***	0.0537***	0.0409***	0.0410***	0.0562***	0.0624***	0.0637***	0.0562***	0.0592***	0.0664***	0.0591***	0.0588***
	(0.00207)	(0.00214)	(0.00216)	(0.00207)	(0.00335)	(0.00241)	(0.00335)	(0.00336)	(0.00213)	(0.00220)	(0.00221)	(0.00213)	(0.00345)	(0.00248)	(0.00345)	(0.00346)
Immigrant father # rank	0.0680***	0.0704***	0.0718***	0.0680***	0.0716***	0.0690***	0.0719***	0.0722***	0.0692***	0.0676***	0.0642***	0.0692***	0.0413***	0.0619***	0.0435***	0.0432***
	(0.0116)	(0.0116)	(0.0116)	(0.0116)	(0.0160)	(0.0116)	(0.0159)	(0.0159)	(0.0104)	(0.0104)	(0.0104)	(0.0104)	(0.0142)	(0.0104)	(0.0142)	(0.0142)
Constant	60.10***	82.98***	60.71***	60.10***	65.07***	63.79***	88.29***	64.34***	34.50***	60.40***	33.94***	34.50***	34.17***	30.52***	59.99***	34.94***
	(0.119)	(0.169)	(0.211)	(0.119)	(3.817)	(3.241)	(3.821)	(3.800)	(0.121)	(0.121)	(0.221)	(0.121)	(5.669)	(3.871)	(5.723)	(5.675)
Observations	203,355	203,355	203,355	203,355	93,461	203,355	93,461	93,461	191,846	191,846	191,846	191,846	88,378	191,846	88,378	88,378
R-squared	0.011	0.015	0.016	0.011	0.020	0.022	0.023	0.024	0.006	0.013	0.016	0.006	0.018	0.022	0.024	0.025
Parental region	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0
Parental municipality	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
Parental wealth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parental industry, 27 grp.	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1
Parental industry, 3-digit	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1990 and included as fixed effects. We have 27 regions and 95 municipalities (we use the 95 French departments as municipalities to be consistent with the Danish geography). Parental industry can only be aggregated into 100 groups. French data does not include wealth variables. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

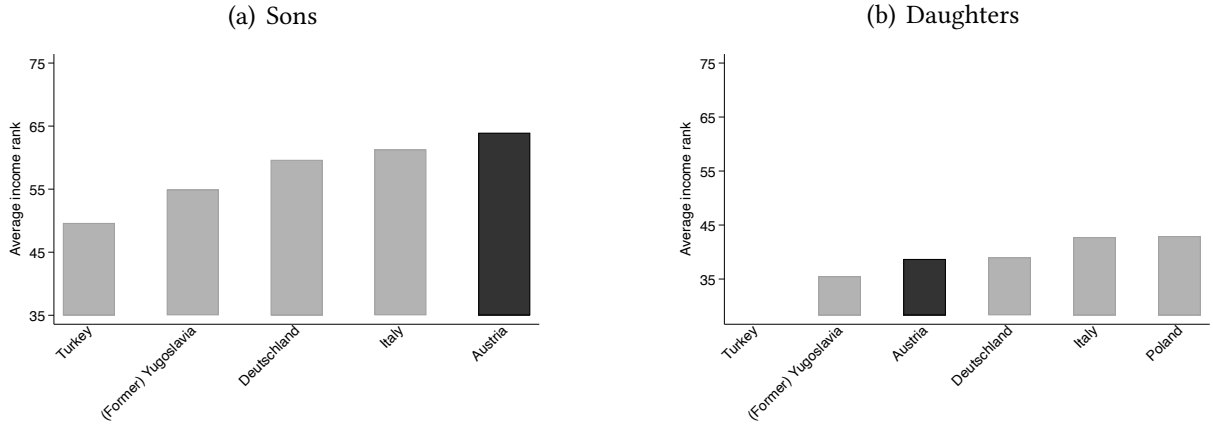
C.3.4.2 Heterogeneity across sending countries

Figure C.3.9: Average income at 25th percentile: Austria



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.3.10: Average income at 75th percentile: Austria



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.3.4.3 Employment

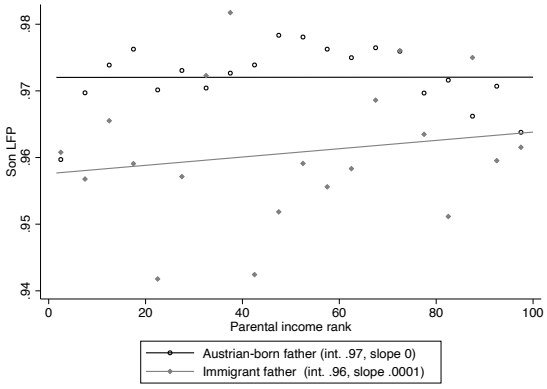
Table C.3.11: Linked data: Intergenerational mobility estimates, employment, Austria

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0144***	-0.0125**
	(0.00470)	(0.00626)
Parents' rank	3.72e-07	0.000146***
	(1.36e-05)	(1.83e-05)
Immigrant father # rank	6.20e-05	0.000203*
	(8.35e-05)	(0.000109)
Constant	0.972***	0.937***
	(0.000777)	(0.00109)
Observations	203,355	191,846
R-squared	0.000	0.000

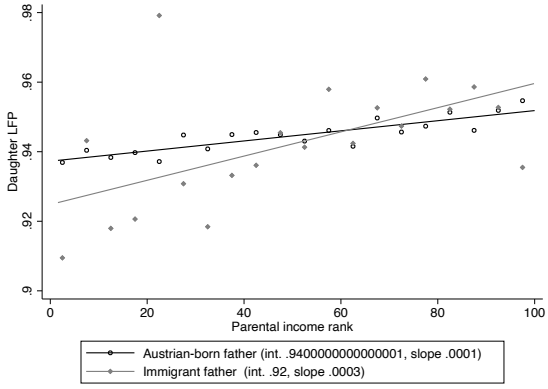
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.3.11: Linked data: Intergenerational mobility, employment, Austria

(a) Austria, sons



(b) Austria, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.3.4.4 Educational mobility

College enrolment

College enrolment are not available in Austria linked data.

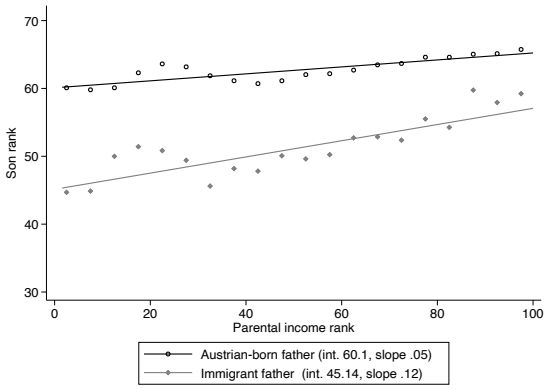
Primary school grades
School grades are not available in Austria linked data.

C.3.5 Robustness

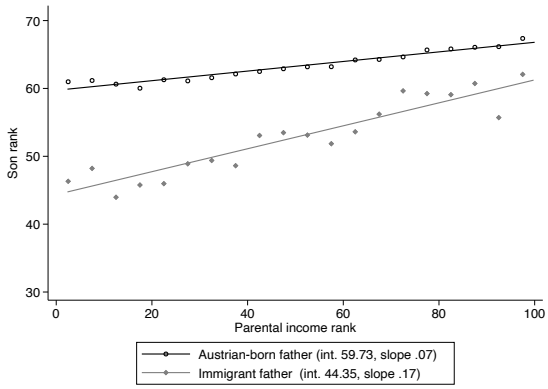
C.3.5.1 More recent birth cohorts, income rank

Figure C.3.12: Linked data: Intergenerational mobility, Austria, comparison across cohorts

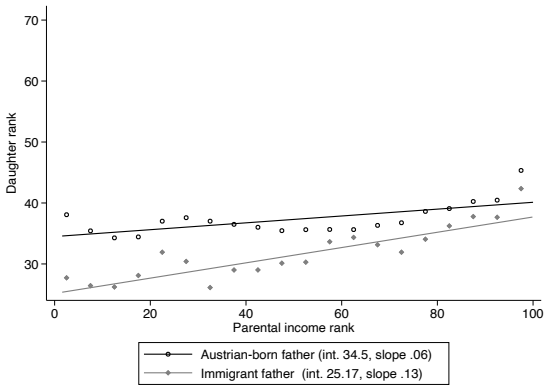
(a) Austria, sons, born 1978-1983



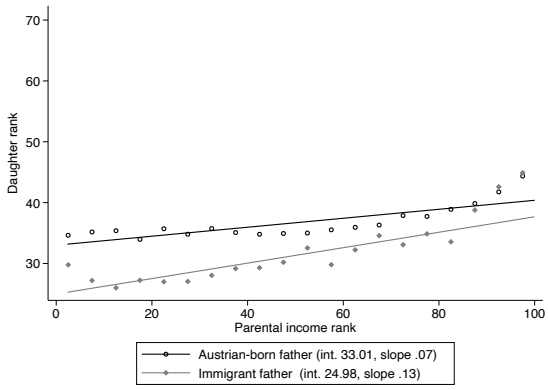
(b) Austria, sons, born 1982-1987



(c) Austria, daughters, born 1978-1983



(d) Austria, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.3.12: Linked data: Intergenerational mobility estimates, Austria, comparing cohorts

	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-14.96***	-9.330***	-15.38***	-8.024***
	(0.643)	(0.543)	(0.630)	(0.530)
Parents' rank	0.0513***	0.0562***	0.0707***	0.0738***
	(0.00207)	(0.00213)	(0.00214)	(0.00220)
Immigrant father # rank	0.0680***	0.0692***	0.0984***	0.0531***
	(0.0116)	(0.0104)	(0.0132)	(0.0119)
Constant	60.10***	34.50***	59.73***	33.01***
	(0.119)	(0.121)	(0.122)	(0.123)
Observations	203,355	191,846	187,293	177,901
R-squared	0.011	0.006	0.015	0.010

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.4 Country-specific details & results: Canada

C.4.1 Data details and deviations

The Canadian results are based on two main data sources: the Intergenerational Income Database or IID (Statistics Canada, 2019) and the Canadian Census of Population (Statistics Canada, 2018b). Additionally, the linkage keys between the IID and the Census are used to supplement the administrative tax files with information contained in the Census (Statistics Canada, 2023).

Census of Population. The Canadian long-form Census is a mandatory survey administered to 20 to 25% of the Canadian population every five years. The target population does not include people living in institutions and collective dwellings, or armed forces personnel stationed outside of Canada (Statistics Canada, 2018a). In 2011, the long-form Census was replaced with the voluntary National Household Survey (NHS) (Statistics Canada, 2014). In 2016, the mandatory long-form census was reinstated. The 1981 Census and 2011 NHS files are used in the cross-sectional analyses. The 1996 to 2016 files are used to retrieve information on immigrant status, country of origin, and educational attainment to link to the intergenerational tax files.

Intergenerational Income Database. The Intergenerational Income Database is a set of administrative tax files covering children born between 1963 and 1985, inclusively (but not including 1971, 1976 and 1981), who lived in Canada for at least one year between the ages of 16 to 19. The IID contains annual tax files starting in 1978 up to 2016, for the children as well as their parents. Parents are linked to their children using information contained in the tax files when the children are aged 16 to 19. Note that the data do not identify biological links, but rather the family structure at those ages—a child may thus be living with their two biological parents, but also with adoptive parents, or with one biological parent and one step-parent. The IID does not contain information on country of birth, immigration status, or educational attainment. To obtain these variables, we use linkage keys provided by Statistics Canada to find the IID individuals (children, fathers, mothers) in one of the Census waves between 1996 and 2016 (NHS in 2011). Since the long-form Census is administered to 20-25% of households, we are unable to get a Census linkage for all the IID individuals, but the selection should be random. The IID comes with a set of weights meant to make sure that the data are representative of its target population (see Statistics Canada (2017) for more on weights). These weights are used in all computations, and the number of observations shown in the Canadian results are weighted counts (rounded to base 10).

Data access. Access to all the above datasets is done through an online application via the (*Microdata Access Portal*). Only researchers affiliated with academic or governmental institutions are eligible to apply. The application consists of a research proposal and a security clearance, and is subject to the approval of Statistics Canada. Data access is through Research Data Centres, located in several academic institutions throughout Canada (https://www.statcan.gc.ca/en/microdata/data-centres/community).

C.4.1.1 Cross-sectional data

First-generation sample. We follow the same sample definition as in the Danish case, using the 1981 population census to identify fathers aged 30 to 50 with at least one child, residing in Canada in 1980, and who were born in Canada or in one of the top 20 sending countries.

First-generation immigration status. Following the Danish case, immigration status is based on country of birth.

First-generation income. The 1981 Census contains self-reported labor (employment) income and total household income. Labor income is measured in 1980 and includes wages, salaries, self-employment income and net farm/business income. Total household income is the sum of all sources of income (including labour market income, capital income, and benefits/transfers), across all household members.

Second-generation sample. We use the 2011 NHS to identify sons aged 30 to 50, residing in Canada in 2010, who were born in Canada from fathers born either in Canada or in one of the top 20 sending countries.

Second-generation immigration status. The 2011 NHS contains information on the place of birth of sons as well as the place of birth of their fathers.

Second-generation income. In the 2011 NHS, around seventy percent of respondents gave permission to Statistics Canada to pull their income records from their tax files instead of self-reporting. We use employment income and total household income as for the first-generation sample. Net capital gains and losses were not included in the definition of total income.

C.4.1.2 Linked data

Sample definition. The linked data analysis is conducted on IID children born between 1978 and 1983, inclusively, for whom Census information could be retrieved.

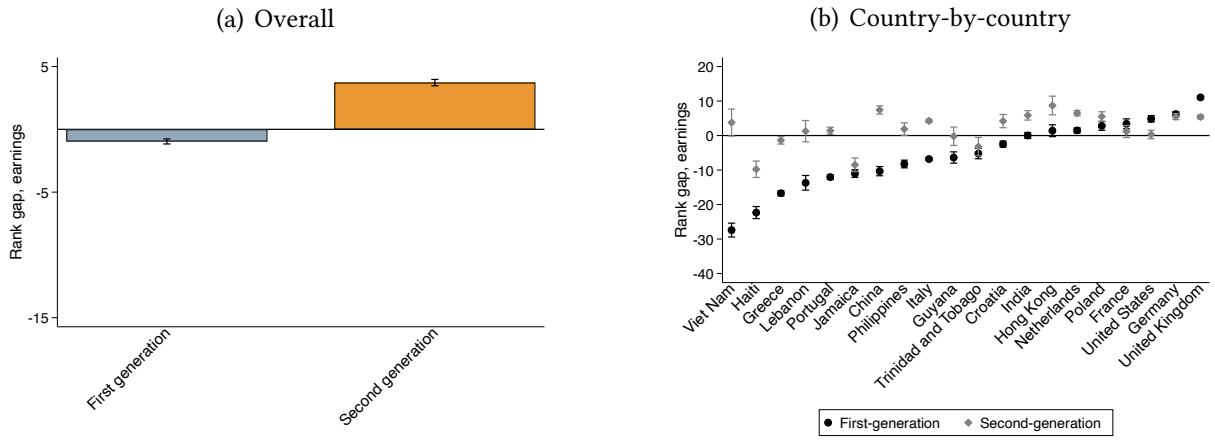
First-generation income. Parental total income is observed in the tax data and includes income from all sources: labor market income, capital income, and benefits/transfers. Dollar figures are adjusted for inflation using the Consumer Price Index (Statistics Canada, 2021). We use the sum of both the father's and mother's income, averaged over the years 1994 to 2000, as in the Danish case. Percentile ranks are computed within child birth year, regardless of the age of the parents.

Second-generation income. Child individual total income is observed in the tax data and averaged over the years 2014 and 2015. Percentile ranks are computed within child birth year.

Immigration status. Using the IID-Census linkage keys, we can retrieve information on father's country of birth for a large (and random) share of our IID individuals. As in the Danish case, we keep children who were born in Canada, with fathers who were born outside of Canada. Note that since the child-parent link in the tax data is based on family structure during adolescence, we are unable to find a father ID for some children. However, we can link such children to the Census, where there is information on their father's country of birth for around 2/3 of these individuals. We do not use mother's country of birth when father's country of birth is unavailable, we simply drop those children from our analysis sample, so immigration status is solely based on father's country of birth.

C.4.2 Cross-sectional results

Figure C.4.13: Cross-sectional results using earnings: Canada, 1981-2011 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1981 and 2011 respectively. We use measures of earnings for both generations. Panel a) includes a non-Canadian dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.4.13: Cross-sectional data: Summary statistics, Canada

Fathers: 1981 cohort

	Immigrants	Canadian-born	Diff.	Std. Error
Age	39.760	38.858	-0.920***	0.021
Rank gap, total income	50.280	49.911	-1.030***	0.101
Rank gap, earnings	49.251	50.215	0.271***	0.101
ln(total income)	10.211	10.195	-0.033***	0.002
ln(earnings)	9.805	9.820	-0.004	0.003
Total income > 0	0.993	0.996	0.003***	0.000
Earnings > 0	0.958	0.954	-0.006***	0.001
Share of population	0.222	0.778		
N	105980	371260		

Sons: 2011 cohort

	Immigrant father	Canadian-born father	Diff.	Std. Error
Age	39.799	40.589	0.658***	0.020
Rank gap, total income	54.529	49.097	-6.022***	0.093
Rank gap, earnings	53.098	49.380	-4.640***	0.094
ln(total income)	11.324	11.192	-0.154***	0.003
ln(earnings)	10.782	10.688	-0.121***	0.003
Total income > 0	0.999	0.999	0.000	0.000
Earnings > 0	0.894	0.883	-0.017***	0.001
Share of population	0.161	0.839		
N	114,330	597,190		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1981 and 2011 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.4.3 Main results

C.4.3.1 Summary statistics

Table C.4.14: Linked data: Summary statistics, Canada

Sons

	Immigrant father	Canadian-born father	Diff.	Std. Error
Child age in 2014	33.666	33.589	-0.077***	0.007
Child income rank	55.379	54.209	-1.170***	0.126
Child labour force part.	0.766	0.789	0.023***	0.002
Mother's age at child birth	28.866	27.167	-1.698***	0.025
Father's age at child birth	32.380	29.508	-2.873***	0.028
Parental income rank	52.060	48.616	-3.444***	0.121
Child share of population	0.195	0.804		
N	90,680	373,990		

Daughters

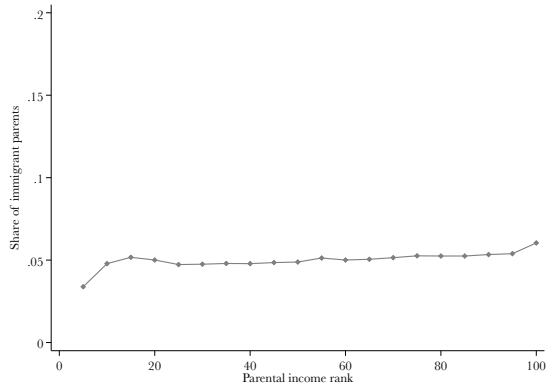
	Immigrant father	Canadian-born father	Diff.	Std. Error
Child age in 2014	33.678	33.579	-0.099***	0.008
Child income rank	48.213	44.711	-3.502***	0.117
Child labour force part.	0.764	0.776	0.012***	0.002
Mother's age at child birth	28.909	27.215	-1.694***	0.026
Father's age at child birth	32.436	29.556	-2.880***	0.028
Parental income rank	52.432	50.300	-2.133***	0.125
Child share of population	0.203	0.797		
N	91,660	359,020		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child earnings measured in 2014-2015, and parental earnings 1994-2000. Canadian data does not include wealth variables. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

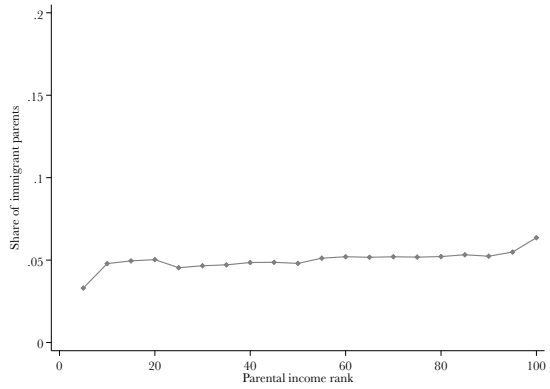
C.4.3.2 Parental income distribution

Figure C.4.14: Linked data: Canada, share of total number of children with immigrant parents

(a) Sons



(b) Daughters

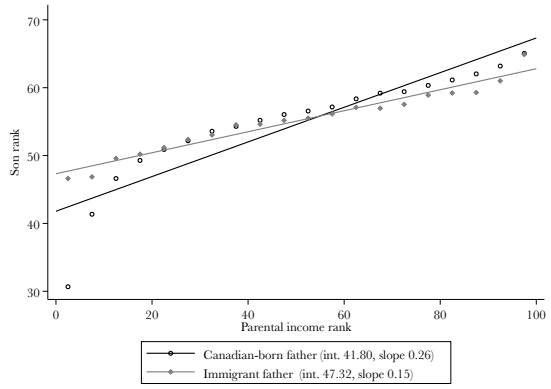


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income is measured in 1994-2000. Income ranks, 0-100, are determined within child cohorts.

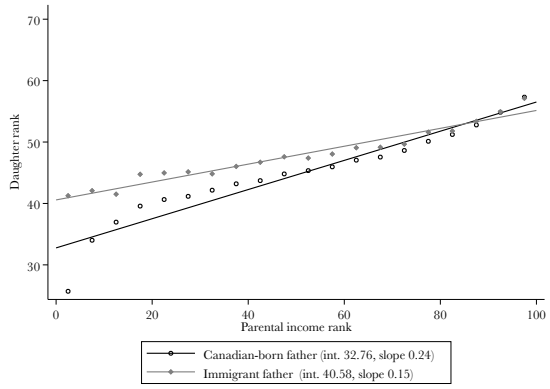
C.4.3.3 Rank-rank relationship

Figure C.4.15: Linked data: Intergenerational mobility, Canada

(a) Canada, sons



(b) Canada, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.4.15: Linked data: Intergenerational mobility estimates, Canada

	(1)	(2)
VARIABLES	Sons	Daughters
Immigrant father = 1	5.525***	7.811***
	(0.273)	(0.249)
Parents' rank	0.255***	0.238***
	(0.00194)	(0.00177)
Immigrant father # rank	-0.101***	-0.0918***
	(0.00446)	(0.00413)
Constant	41.80***	32.76***
	(0.116)	(0.104)
Observations	464,670	450,680
R-squared	0.053	0.060

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.4.3.4 Oaxaca-Blinder decomposition

Table C.4.16: Oaxaca-Blinder decompositions, child income rank, Canada

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: Immigrant father	55.38***	55.38***	55.38***	48.21***	48.21***	48.21***
	(0.108)	(0.113)	(0.113)	(0.101)	(0.105)	(0.105)
Mean child income rank: No immigrant father	54.21***	54.21***	54.21***	44.71***	44.71***	44.71***
	(0.0563)	(0.0558)	(0.0558)	(0.0519)	(0.0513)	(0.0513)
Difference in means	1.170***	1.170***	1.170***	3.502***	3.502***	3.502***
	(0.122)	(0.126)	(0.126)	(0.113)	(0.117)	(0.117)
Total explained difference	0.812***	0.533***	0.187***	0.467***	0.311***	0.115***
due to differences in parental income distributions	(0.0280)	(0.0226)	(0.0291)	(0.0265)	(0.0192)	(0.0176)
Total unexplained difference	0.358***	0.637***	0.984***	3.035***	3.191***	3.387***
due to differences in mobility parameters	(0.120)	(0.126)	(0.131)	(0.112)	(0.116)	(0.118)
- Parental income rank (*relative mobility*)	-5.167***	-4.888***	-4.542***	-4.776***	-4.620***	-4.424***
	(0.222)	(0.217)	(0.202)	(0.207)	(0.208)	(0.199)
- Intercept (*absolute mobility*)	5.525***	5.525***	5.525***	7.811***	7.811***	7.811***
	(0.264)	(0.273)	(0.273)	(0.241)	(0.249)	(0.249)
Observations	464,670	464,670	464,670	450,680	450,680	450,680

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.4.4 Mechanisms

C.4.4.1 Various sets of controls

Table C.4.17: Linked data: Intergenerational mobility estimates with various sets of controls, Canada

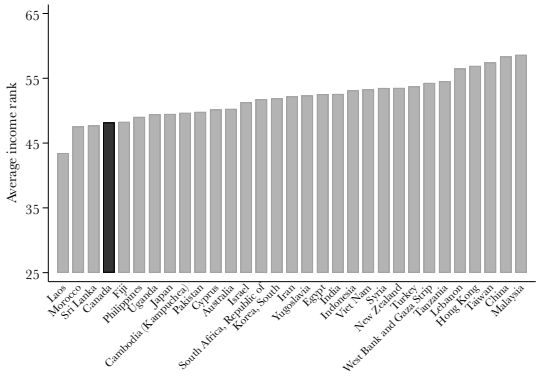
VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Daughters	(6) Daughters	(7) Daughters	(8) Daughters
Immigrant father = 1	5.525***	5.465***	6.699***	7.926***	7.811***	7.939***	9.428***	9.044***
	(0.273)	(0.307)	(0.311)	(0.319)	(0.249)	(0.286)	(0.290)	(0.298)
Parents' rank	0.255***	0.242***	0.252***	0.261***	0.238***	0.233***	0.245***	0.241***
	(0.00194)	(0.00210)	(0.00214)	(0.00220)	(0.00177)	(0.00193)	(0.00196)	(0.00203)
Immigrant father # rank	-0.101***	-0.0965***	-0.102***	-0.110***	-0.0918***	-0.0913***	-0.0973***	-0.0964***
	(0.00446)	(0.00487)	(0.00487)	(0.00489)	(0.00413)	(0.00457)	(0.00458)	(0.00460)
Constant	41.80***	42.83***	51.54***	54.95***	32.76***	33.04***	35.97***	35.90***
	(0.116)	(0.128)	(0.337)	(0.427)	(0.104)	(0.117)	(0.310)	(0.400)
Observations	464,670	405,920	405,920	405,920	450,680	389,900	389,900	389,900
R-squared	0.053	0.046	0.059	0.064	0.060	0.055	0.062	0.065
Non-missing father's geo	0	1	1	1	0	1	1	1
Parental region	0	0	1	0	0	0	1	0
Parental municipality	0	0	0	1	0	0	0	1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Father's geographical information is determined in 1994 and included as fixed effects. Not all fathers have geographical information for residence in 1994, so the sample size decreases when using region or municipality fixed effects. Column 2) reports estimates of Specification 1 on the sample for which father's geography is available, but without residence fixed effects. We have 10 provinces (used as regions) and 137 Census Agglomerations or Census Metropolitan Areas (CAs or CMAs, used as municipalities to be consistent with the Danish geography). Canadian data do not include wealth or industry variables. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

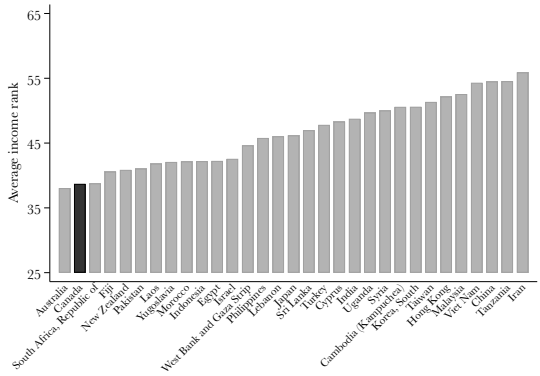
C.4.4.2 Heterogeneity across sending countries

Figure C.4.16: Average income at 25th percentile: Canada

(a) Sons



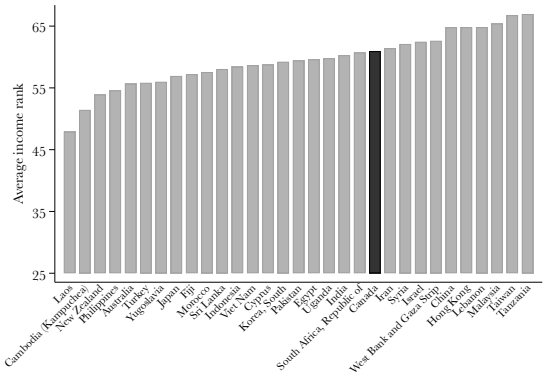
(b) Daughters



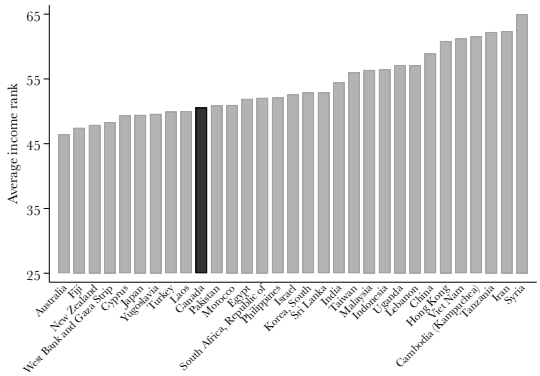
Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.4.17: Average income at 75th percentile: Canada

(a) Sons



(b) Daughters



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.4.4.3 Employment

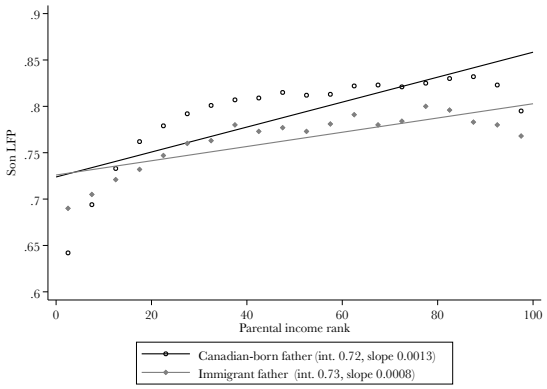
Table C.4.18: Linked data: Intergenerational mobility estimates, employment, Canada

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	0.00213	0.0229***
	(0.00368)	(0.00384)
Parents' rank	0.00135***	0.00123***
	(2.61e-05)	(2.83e-05)
Immigrant father # rank	-0.000577***	-0.000722***
	(5.84e-05)	(6.08e-05)
Constant	0.724***	0.714***
	(0.00162)	(0.00179)
Observations	464,670	450,680
R-squared	0.010	0.007

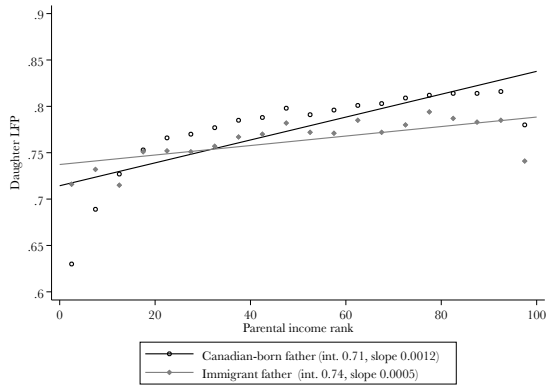
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015 (defined as having non-zero earnings), and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.4.18: Linked data: Intergenerational mobility, employment, Canada

(a) Canada, sons



(b) Canada, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015 (defined as having non-zero earnings), and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

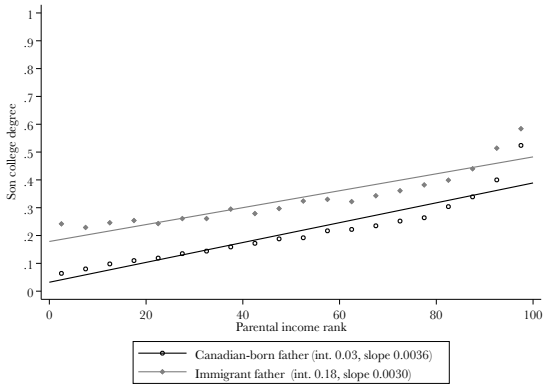
C.4.4.4 Educational mobility

College and postsecondary graduation College enrollment at a given age is not available in the Canadian linked data. However, from the Census, we can retrieve information on the highest

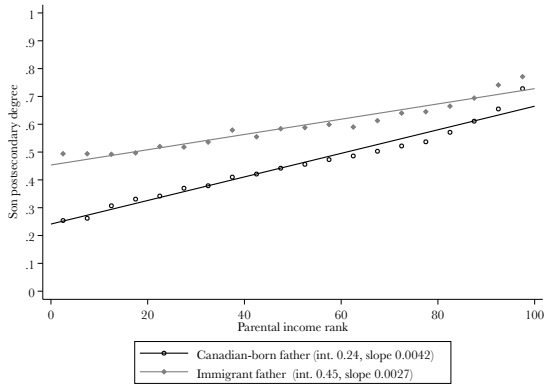
degree, certificate or diploma obtained by the child. We classify someone as having a postsecondary degree if the highest degree obtained is a college, CEGEP or other university certificate or diploma, a university certificate or diploma below bachelor level, or a university certificate, diploma or degree at bachelor level or above. We define college graduation as having any university degree at the Bachelor's level or above.

Figure C.4.19: Linked data: Postsecondary and college graduation, Canada

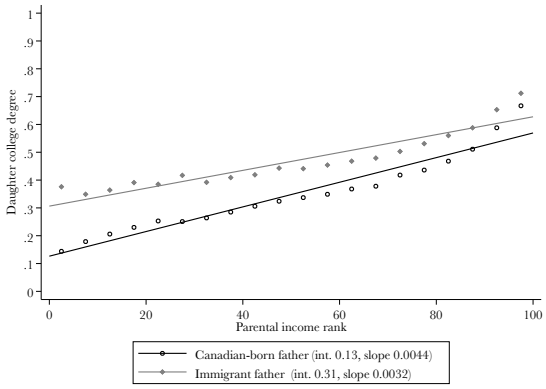
(a) Canada, sons, college degree



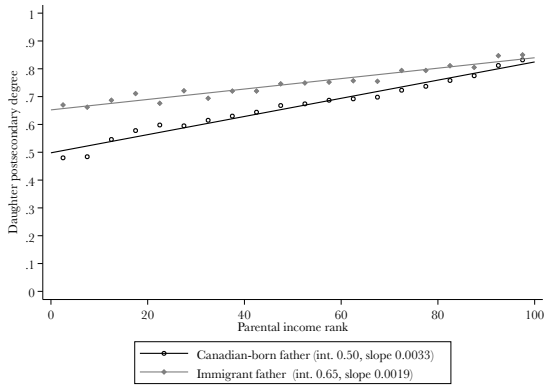
(b) Canada, sons, postsecondary degree



(c) Canada, daughters, college degree



(d) Canada, daughters, postsecondary degree



Notes: This figure plots estimates of Specification 1, regressing an indicator of college or postsecondary graduation on the income rank of parents. We use either college graduation or postsecondary graduation (including university, college, CEGEP) as a proxy for enrollment because the structure of Canadian Census does not allow us to observe enrollment at a given age. Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Parental income ranks, 0-100, are determined within cohorts.

Primary school grades

School grades are not available in Canadian linked data.

C.4.5 Robustness

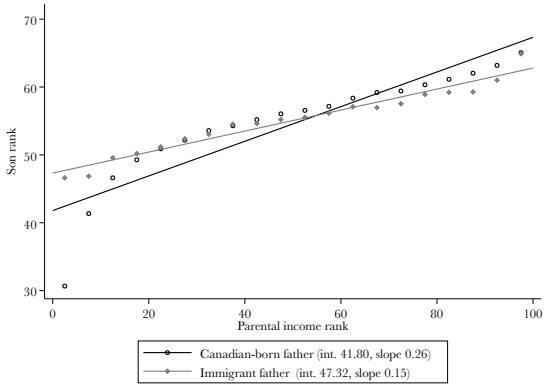
C.4.5.1 Emigration

The Intergenerational Income Database is not well suited to study emigration.

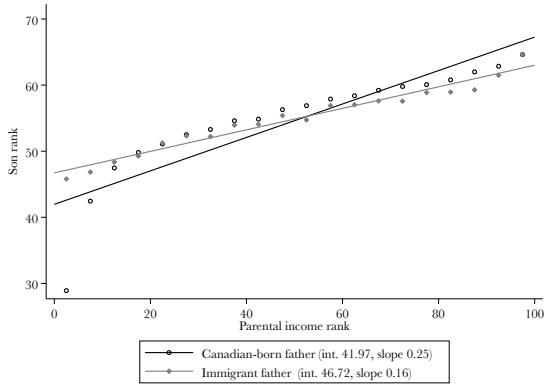
C.4.5.2 Additional years of parental income data

Figure C.4.20: Intergenerational mobility: Canada by number of years of parental income data

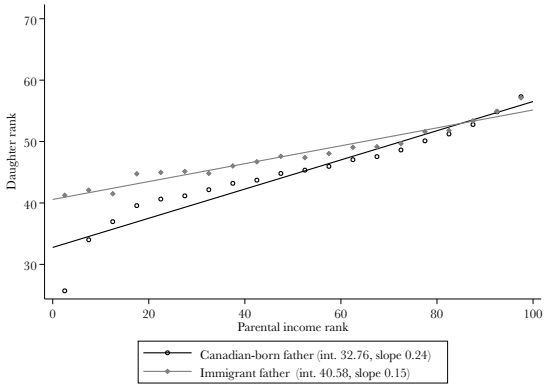
(a) Sons, parental income 1994-2000



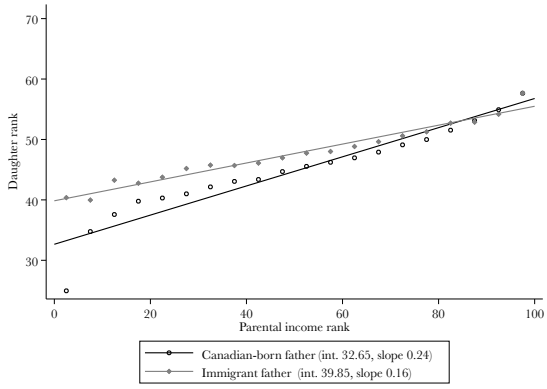
(b) Sons, parental income 1981-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1981-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1981-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.4.19: Intergenerational mobility estimates: Canada, parental income 1981-2000

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	4.752***	7.194***
	(0.278)	(0.252)
Parents' rank	0.253***	0.241***
	(0.00193)	(0.00175)
Immigrant father # rank	-0.0901***	-0.0848***
	(0.00451)	(0.00415)
Constant	41.97***	32.65***
	(0.115)	(0.102)
Observations	464,670	450,680
R-squared	0.052	0.063

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1981-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.4.5.3 More recent birth cohorts, income rank

The Intergenerational Income Database covers birth years up to 1985 (inclusively), adding only up to two birth years to the main sample. We decided not to perform the robustness analysis on the 1982-1985 birth cohort.

C.5 Country-specific details & results: France

C.5.1 Data details and deviations

The Permanent Demographic Sample (*Échantillon Démographique Pemanent* - EDP) is the only large-scale administrative French dataset that contains information on both immigration background and earnings and which enables to link individuals' information to their parents' information. Since 1968, this database combines information from various administrative sources on individuals born during the first 4 days of October. Specifically, we rely on EDP variables from the following sources.

Population Census. Exhaustive population censuses were collected every 7 to 9 years from 1968 to 1999. They contain socio-demographic information but not earnings. We use this data source to measure immigration status in the first generation.

Annual Census Surveys. Since 2004, about 20% of dwellings have been censused every year, such that a complete survey wave can be obtained out of any set of 5 consecutive yearly census surveys. We use this data source to measure immigration status in the second generation.

All Employee Panel. Employer-employee data contains the wages of employees since 1968. Farmers and the self-employed are not included in this dataset, and public-sector jobs were progressively included in the 1980s. Until 2001, only individuals born in an even year were included. We use this data source to measure earnings in the first generation.

Tax Data. Tax returns include detailed information on income. It covers individuals known by the tax authorities via an income tax form or a housing tax form. This source was included in the EDP in 2010. We use this data source to measure income in the second generation.

Data access. Access to the Permanent Demographic Sample is coordinated by the CASD (*Secure Data Access Center*). It involves an access fee and it is subject to the approval of the French Statistical Secret Committee. The connection to secure servers is handled by a specific device that can be located at researchers' own institutions provided that secure access conditions to the device are met. However, access to the *Permanent Demographic Sample* is not authorized from North America.

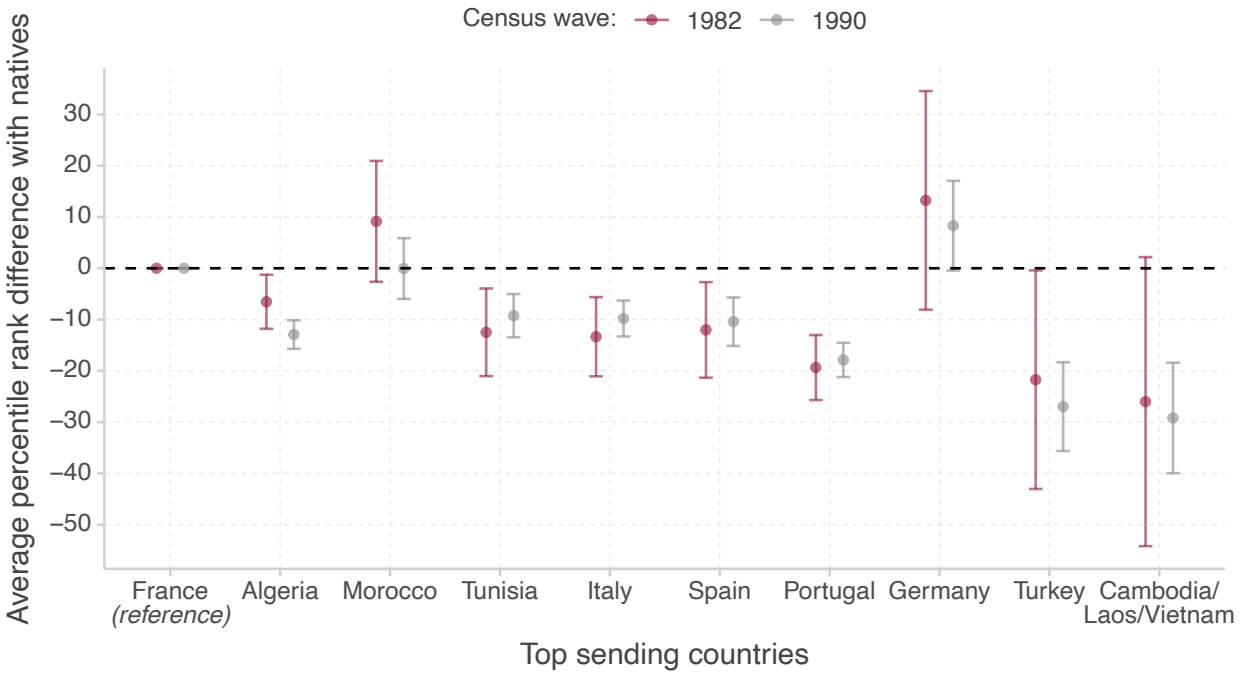
Permanent Demographic Sample - 2020
Producer: Insee & French Ministry for Finance (DGFiP)
Provider: Centre d'Accès Sécurisé aux Données (CASD)
Metadata: https://www.casd.eu/en/source/permanent-demographic-sample/
DOI: http://doi.org/10.34724/CASD.11.4855.V1

C.5.1.1 Cross-sectional data

First-generation sample. We follow the same sample definition as in the Danish case, using the 1990 population census to identify fathers aged 30 to 50 with at least one child, residing in France in the 1980s, and who were born in France or in one of the top-sending countries. We chose to use the 1990 census wave instead of the 1982 census wave because the latter was subject to data collection issues making the sample smaller than it should be. Specifically, we identify fathers in the 1990 census and observe their labor market outcomes in 1980 in the employer-

employee panel data. Figure C.5.21 compares the income-rank gaps between immigrant groups and natives for the two sample waves.

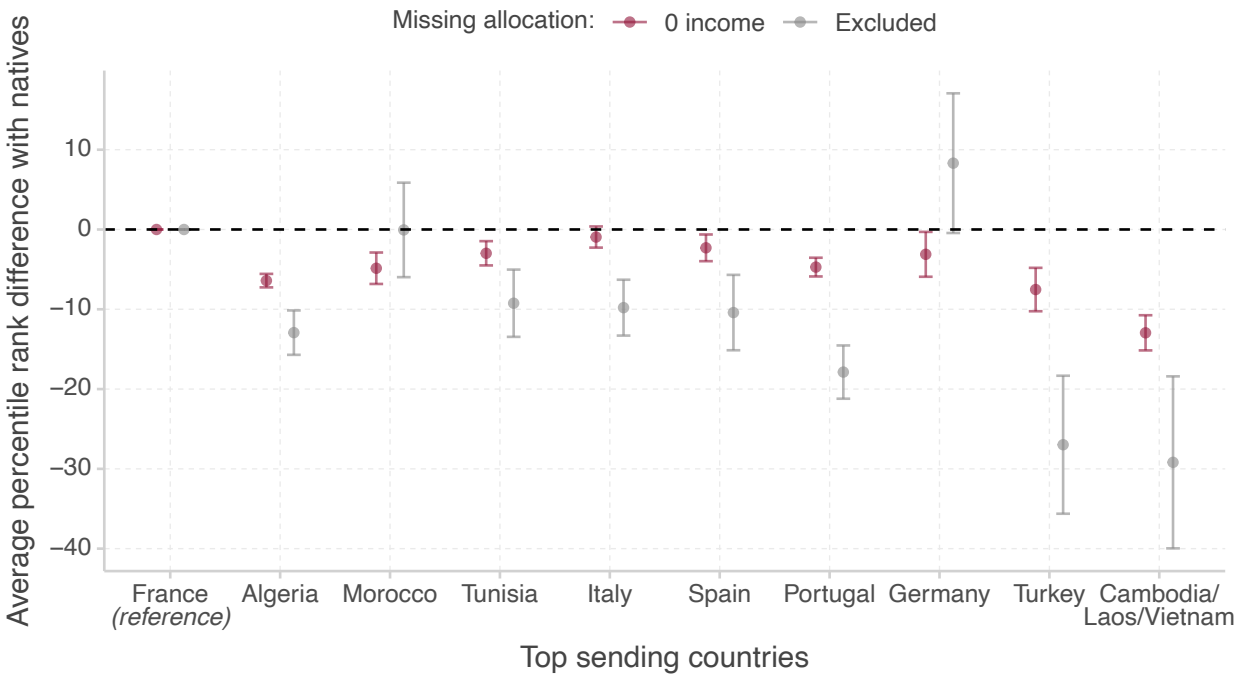
Figure C.5.21: Sample waves comparison



First-generation immigration status. Following the Danish case, immigration status is based on country of birth. This implies that individuals born with French citizenship in the French colonies are considered foreign-born.

First-generation income. Unlike the Danish case, the only income source observed in the 1980s is wages, from employer-employee data. Since self-employment and other types of income are not included in employer-employee data, missing information does not necessarily imply zero income. Thus, we chose not to attribute a zero income to individuals for whom we do not observe an income. Figure C.5.22 compares the income-rank gaps between immigrant groups and natives resulting from each approach.

Figure C.5.22: Exclusion of missing earnings versus replacement with 0 earnings

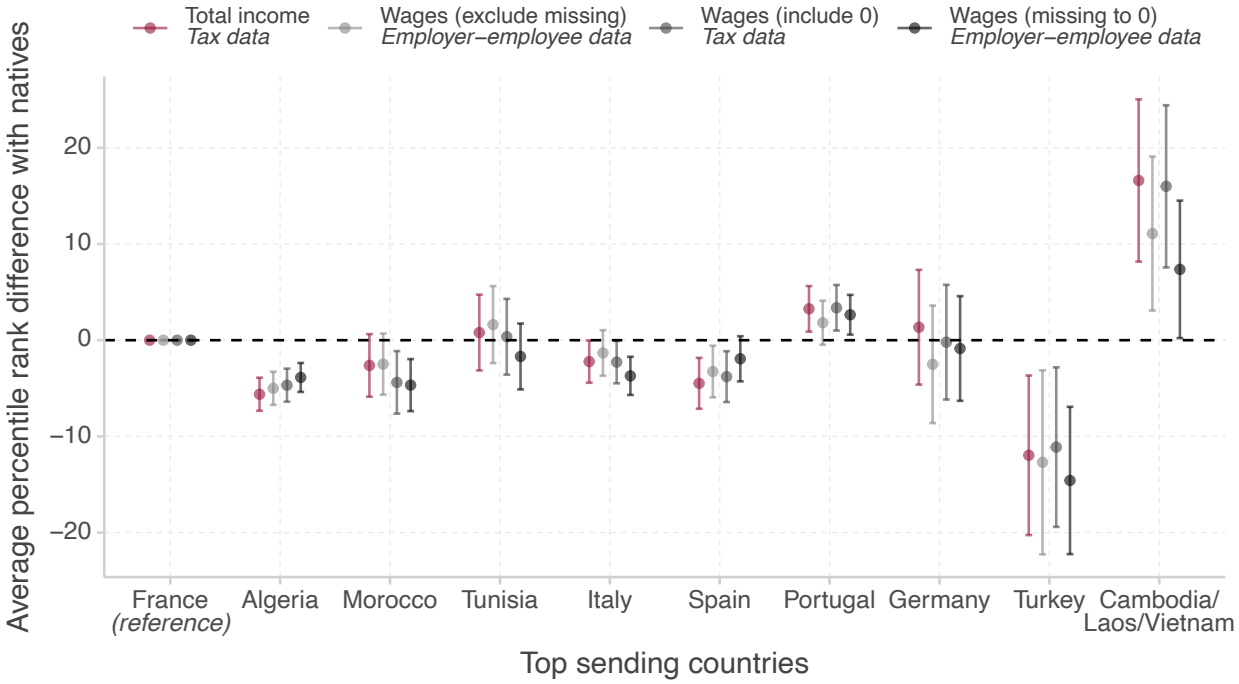


Second-generation sample. We use the 2010-2015 annual census surveys to identify sons aged 30 to 50, residing in France in the 2010s, who were born in France from fathers born either in France or in one of the top-sending countries. Since the census data only collects information on parents' places of birth for children, we rely on the linked structure of the EDP to recover fathers' information in earlier census rounds, when the son lived in the same household as the father (rounds 1975, 1982, 1990, and 1999). We recover fathers' information for 92% of individuals.

Second-generation immigration status. The definition varies depending on the census round in which the father's information was found. When the father's information comes from rounds 1990-1999 the definition is based on the father's place of birth, as in the Danish case. However, parents' places of birth are not available in census rounds 1975-1982, so we have to use the father's nationality instead. We rely on the father's nationality in 12% of cases, and the exclusion of these observations does not change our results.

Second-generation income. Since 2010, tax data is available in the EDP on top of employer-employee data, which allows us to use the total income for the second generation. Figure C.5.23 compares the income-rank gaps between immigrant groups and natives across income definitions.

Figure C.5.23: Income definitions comparison



C.5.1.2 Linked data

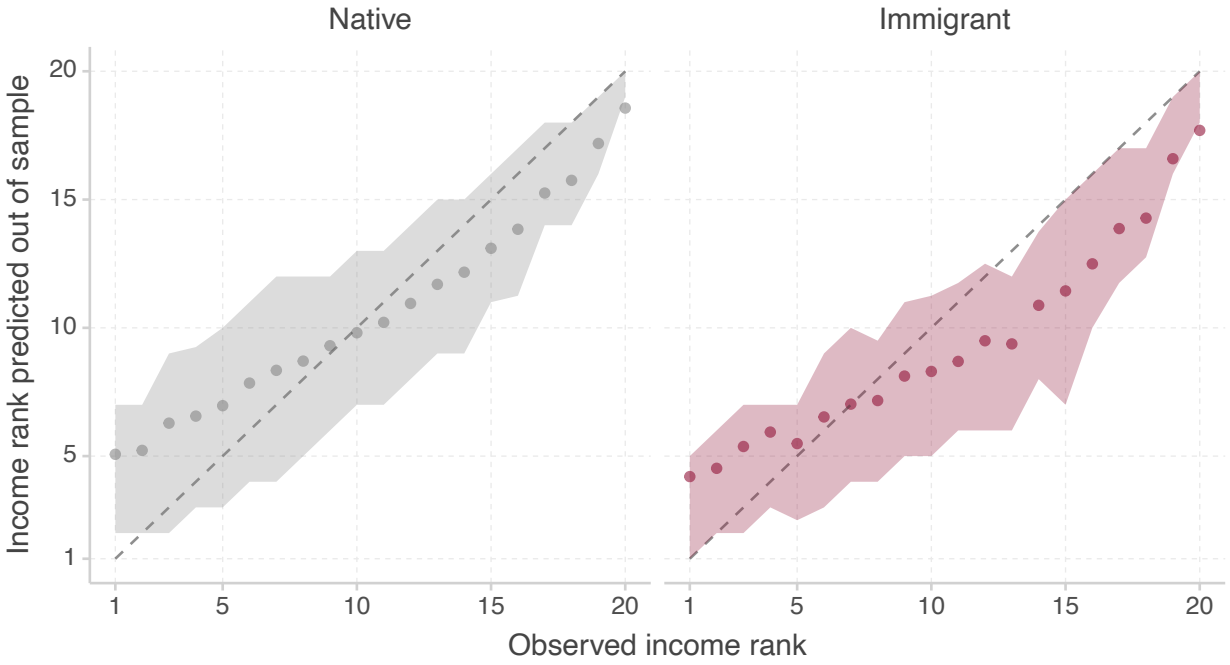
Sample definition. The linked data analysis is conducted on individuals observed in the 1990 census as dependent children, which is where the link with parents' information can be made. Individuals with one or two parents who were always either farmers or self-employed cannot be included in the analysis because these professional categories are not covered by employer-employee data.

First-generation income. Child income is observed in tax data and includes labor earnings (wages and self-employment income), unemployment benefits, retirement, and alimony.

Second-generation income. Unless individuals' parents were also born during one of the first four days of October, no data source in the EDP documents the earnings of EDP individuals' parents. Following Kenedi & Sirugue (2023), we rely on the fact that the 1990 census includes predictors of parents' earnings to estimate a prediction model on individuals from the parents' generation who were born during the first four days of October. We predict separately father earnings and mother earnings from the employer-employee data based on their 1990 census information: birth cohort, birth nationality, place of birth, education level, detailed occupation, household structure, and the average socio-economic characteristics in their municipality of residence. Figure C.5.24 shows the average individual income ventiles predicted out of sample against the observed individual income ventiles, for native and immigrant parents separately. For each parent, we average the yearly income observations in the employer-employee data instead of summing all income observations because missing observations can either reflect that the individual has no labor income or has a profession that is not covered by the employer-employee data. Also, given that household structure is observed only in 1990, summing the income of both par-

ents would disproportionately affect single parents. Thus, we use the average predicted income of parent(s) as parents' income.

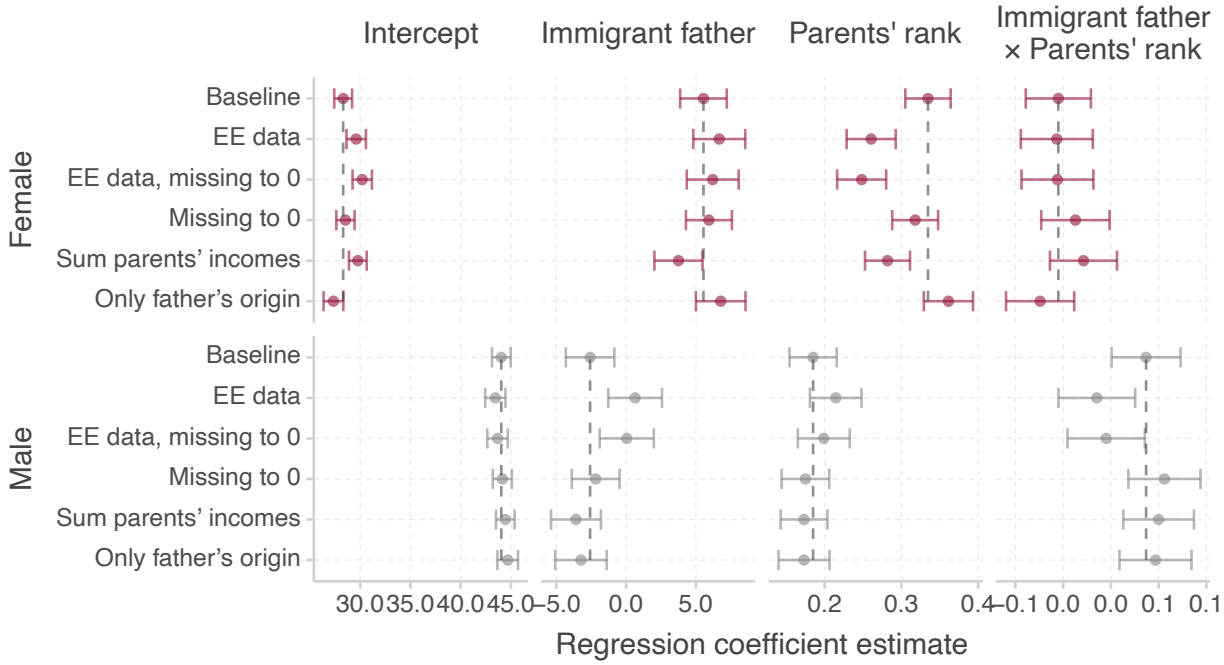
Figure C.5.24: Parents' income rank predictions



Immigration status. As in the cross-sectional analysis, following the Danish case, immigration status is based on country of birth. This implies that individuals born with French citizenship in the French colonies are considered foreign-born. If the father was not part of the household in 1990, his place of birth is not observed. To avoid dropping children of single mothers, in such cases ($\approx 10\%$) we use mothers' place of birth instead of fathers' place of birth to determine immigration status.

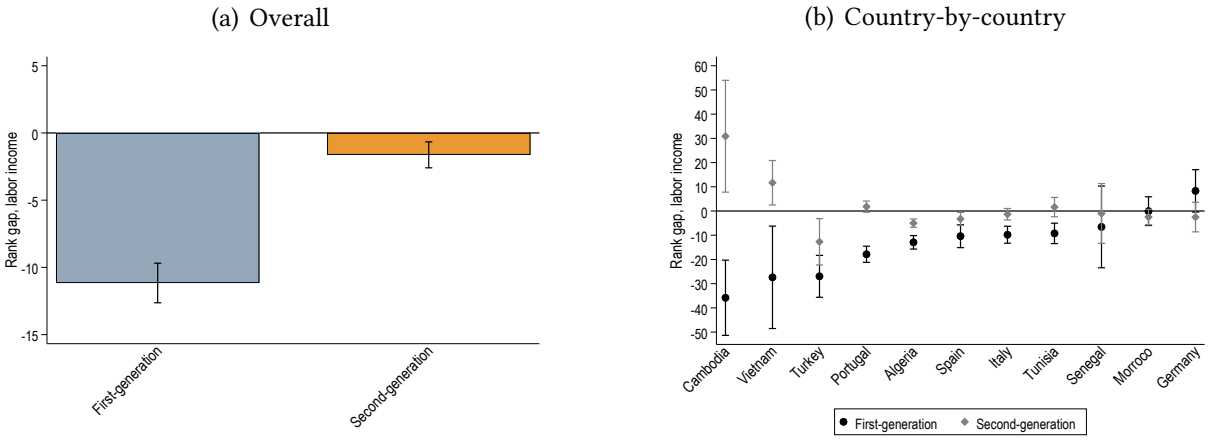
Figure C.5.25 shows the robustness of each coefficient from the baseline intergenerational mobility regression to variations in the definition of income and immigration status.

Figure C.5.25: Robustness to deviations from baseline variable definition choices



C.5.2 Cross-sectional results

Figure C.5.26: Cross-sectional results using earnings: France, 1980-2010 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1980 and 2010 respectively. We use measures of earnings for both generations. Panel a) includes a non-French dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.5.20: Cross-sectional data: Summary statistics, France

Fathers: 1980 cohort

	Immigrants	French-born	Diff.	Std. Error
Age	47.677	46.987	-0.691***	0.155
Rank gap, earnings	40.248	51.406	11.159***	0.751
ln(earnings)	9.794	9.986	0.192***	0.021
Share of population	0.126	0.874		
N	1667.000	11561.000		

Sons: 2010 cohort

	Immigrant father	French-born father	Diff.	Std. Error
Age	38.831	40.193	1.362***	0.100
Rank gap, earnings	48.541	50.148	1.607***	0.494
ln(earnings)	9.869	9.963	0.095***	0.015
Share of population	0.092	0.908		
N	3769.000	37210.000		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1980 and 2010 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. These computations are made on employer-employee data that only contains earnings of wage earners, hence the absence of row on total income and on non-positive earnings/income. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.5.3 Main results

C.5.3.1 Summary statistics

Table C.5.21: Linked data: Summary statistics, France

Sons

	Immigrant father	French-born father	Diff.	Std. Error
Child age	33.981	34.025	0.044	0.030
Child income rank	51.055	57.130	6.075***	0.548
Child labour force part.	0.928	0.955	0.027***	0.004
Mother's age at child birth	27.270	26.307	-0.963***	0.088
Father's age at child birth	32.174	28.585	-3.589***	0.107
Parental income rank	34.337	53.959	19.622***	0.536
Child share of population	0.153	0.847		
N	3816.000	21112.000		

Daughters

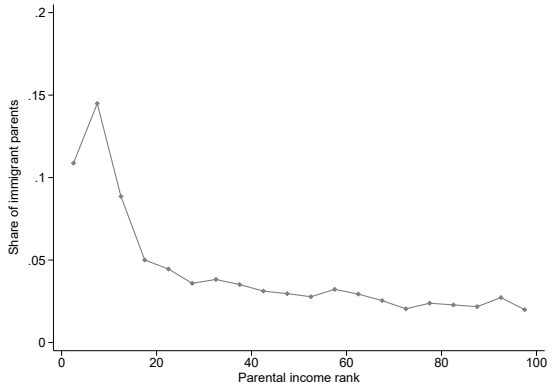
	Immigrant father	French-born father	Diff.	Std. Error
Child age	34.002	34.027	0.025	0.030
Child income rank	43.066	45.243	2.177***	0.537
Child labour force part.	0.876	0.910	0.034***	0.005
Mother's age at child birth	27.109	26.195	-0.914***	0.088
Father's age at child birth	31.958	28.542	-3.416***	0.106
Parental income rank	35.147	53.391	18.244***	0.540
Child share of population	0.152	0.848		
N	3666.000	20498.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child earnings measured in 2014-2015, and parental earnings 1994-2000. French data does not include wealth variables. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

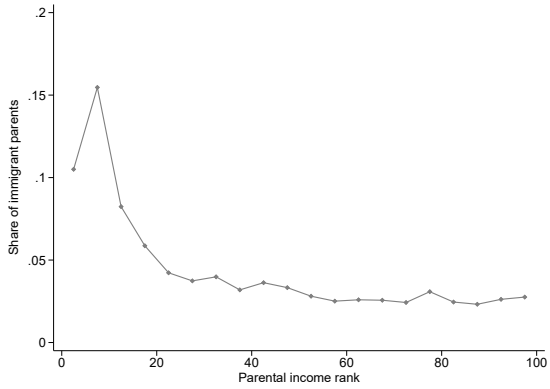
C.5.3.2 Parental income distribution

Figure C.5.27: Linked data: France, share of total number of children with immigrant parents

(a) Sons



(b) Daughters

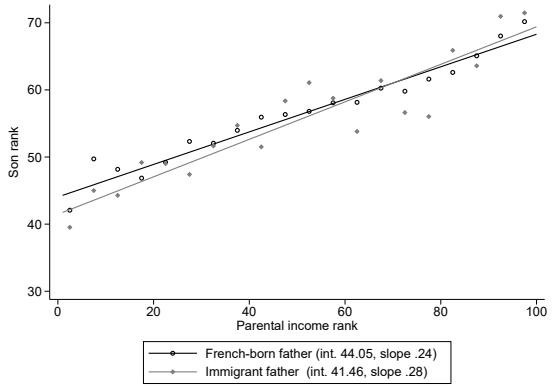


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

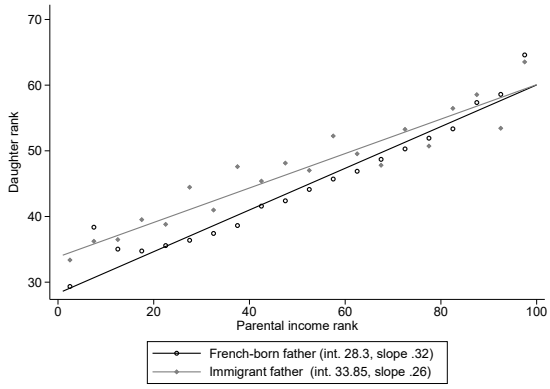
C.5.3.3 Rank-rank relationship

Figure C.5.28: Linked data: Intergenerational mobility, France

(a) France, sons



(b) France, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.5.22: Linked data: Intergenerational mobility estimates, France

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-2.583***	5.547***
	(0.920)	(0.892)
Parents' rank	0.242***	0.317***
	(0.00795)	(0.00756)
Immigrant father # rank	0.0369*	-0.0550***
	(0.0196)	(0.0192)
Constant	44.05***	28.30***
	(0.466)	(0.437)
Observations	19,535	19,373
R-squared	0.065	0.096

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.5.3.4 Oaxaca-Blinder decomposition

Table C.5.23: Oaxaca-Blinder decompositions, child income rank, France

	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	51.05***	51.05***	51.05***	43.07***	43.07***	43.07***
	(0.530)	(0.531)	(0.531)	(0.522)	(0.522)	(0.522)
No immigrant father	57.13***	57.13***	57.13***	45.24***	45.24***	45.24***
	(0.221)	(0.221)	(0.221)	(0.216)	(0.216)	(0.216)
Difference	−6.075***	−6.075***	−6.075***	−2.177***	−2.177***	−2.177***
	(0.575)	(0.575)	(0.575)	(0.565)	(0.565)	(0.565)
Total explained	−4.889***	−4.758***	−5.481***	−5.601***	−5.789***	−4.785***
	(0.198)	(0.206)	(0.384)	(0.215)	(0.226)	(0.354)
Total unexplained	−1.186**	−1.317**	−0.594	3.424***	3.612***	2.608***
	(0.570)	(0.572)	(0.662)	(0.559)	(0.558)	(0.646)
- Parental income rank	1.398*	1.266*	1.990*	−2.123***	−1.935***	−2.939***
	(0.743)	(0.674)	(1.058)	(0.740)	(0.675)	(1.025)
- Constant	−2.583***	−2.583***	−2.583***	5.547***	5.547***	5.547***
	(0.920)	(0.920)	(0.920)	(0.892)	(0.893)	(0.893)
Observations	19,535	19,535	19,535	19,373	19,373	19,373

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.5.4 Mechanisms

C.5.4.1 Various sets of controls

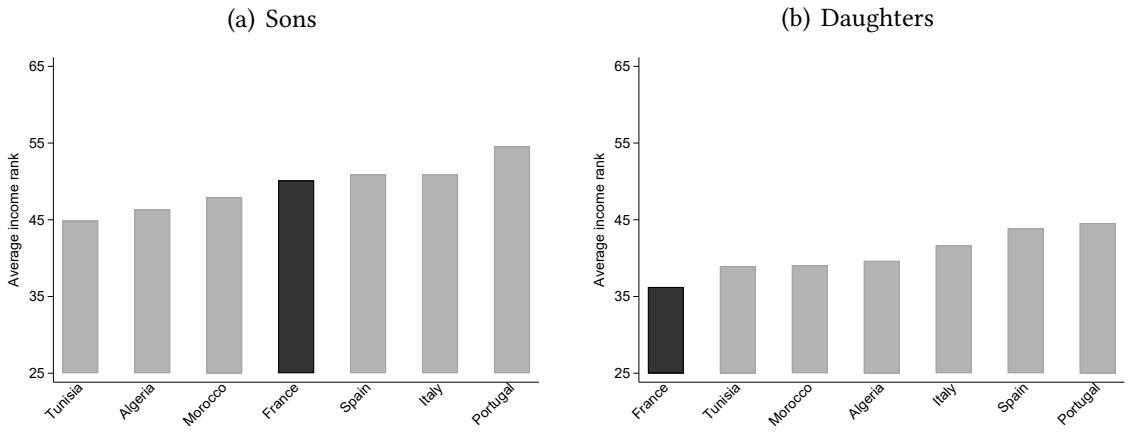
Table C.5.24: Linked data: Intergenerational mobility estimates with various sets of controls, France

VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Daughters	(8) Daughters	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters	(13) Daughters
Immigrant father = 1	-2.583***	-2.908***	-2.831***	-1.959**	-2.403**	-2.367**	5.547***	4.576***	4.414***	5.973***	4.912***	4.729***	4.729***
	(0.920)	(0.939)	(0.947)	(0.930)	(0.950)	(0.958)	(0.892)	(0.908)	(0.914)	(0.901)	(0.918)	(0.925)	(0.925)
Parents' rank	0.242***	0.236***	0.234***	0.234***	0.225***	0.223***	0.317***	0.301***	0.300***	0.271***	0.256***	0.255***	0.255***
	(0.00795)	(0.00820)	(0.00831)	(0.0106)	(0.0109)	(0.0110)	(0.00756)	(0.00779)	(0.00786)	(0.0104)	(0.0106)	(0.0107)	(0.0107)
Immigrant father # rank	0.0369*	0.0399**	0.0408**	0.0293	0.0330*	0.0339*	-0.0550***	-0.0526***	-0.0508***	-0.0616***	-0.0569***	-0.0550***	-0.0550***
	(0.0196)	(0.0196)	(0.0197)	(0.0197)	(0.0197)	(0.0198)	(0.0192)	(0.0192)	(0.0192)	(0.0193)	(0.0193)	(0.0194)	(0.0194)
Constant	44.05***	45.31***	48.12***	54.86***	56.98***	59.32***	28.30***	32.90***	31.30***	34.27***	39.08***	37.30***	37.30***
	(0.466)	(0.754)	(2.332)	(3.068)	(3.155)	(3.888)	(0.437)	(0.718)	(2.731)	(3.225)	(3.288)	(4.257)	(4.257)
Observations	19,535	19,535	19,535	19,535	19,535	19,535	19,373	19,373	19,373	19,373	19,373	19,373	19,373
R-squared	0.065	0.068	0.072	0.082	0.085	0.088	0.096	0.104	0.108	0.114	0.121	0.124	0.124
Parental region	0	1	0	0	1	0	0	1	0	0	1	0	0
Parental municipality	0	0	1	0	0	1	0	0	1	0	0	1	1
Parental industry, 100 grp.	0	0	0	1	1	1	0	0	0	1	1	1	1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1990 and included as fixed effects. We have 27 regions and 95 municipalities (we use the 95 French departments as municipalities to be consistent with the Danish geography). Parental industry can only be aggregated into 100 groups. French data does not include wealth variables. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

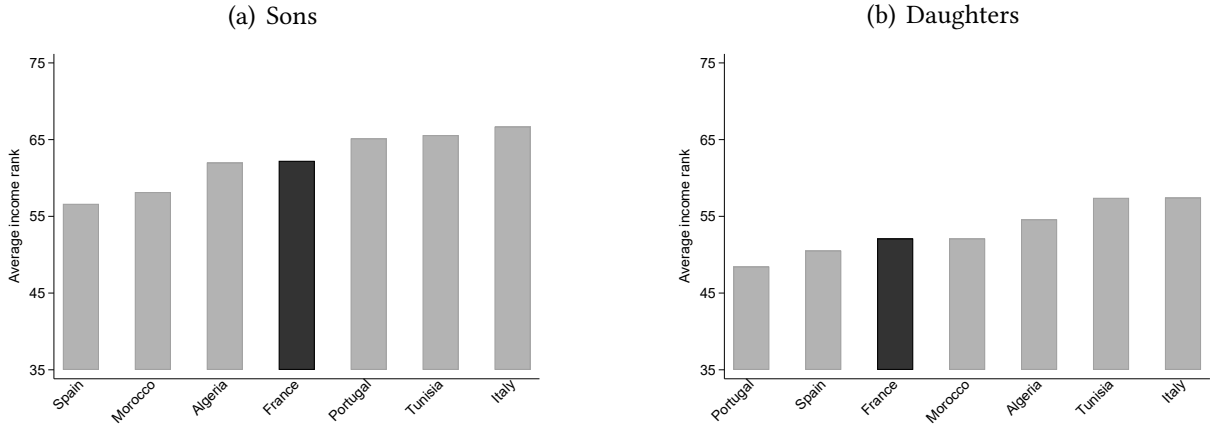
C.5.4.2 Heterogeneity across sending countries

Figure C.5.29: Average income at 25th percentile: France



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.5.30: Average income at 75th percentile: France



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.5.4.3 Employment

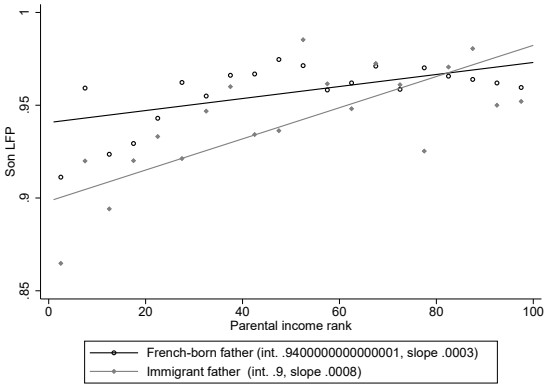
Table C.5.25: Linked data: Intergenerational mobility estimates, employment, France

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0424***	-0.0232**
	(0.00856)	(0.0111)
Parents' rank	0.000324***	0.00141***
	(5.95e-05)	(7.73e-05)
Immigrant father # rank	0.000516***	0.000199
	(0.000154)	(0.000196)
Constant	0.941***	0.841***
	(0.00381)	(0.00530)
Observations	18,360	18,705
R-squared	0.008	0.026

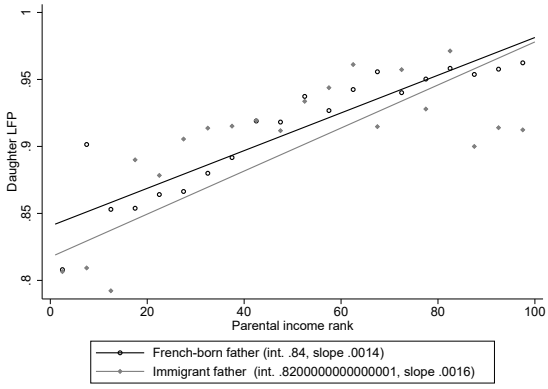
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.5.31: Linked data: Intergenerational mobility, employment, France

(a) France, sons



(b) France, daughters



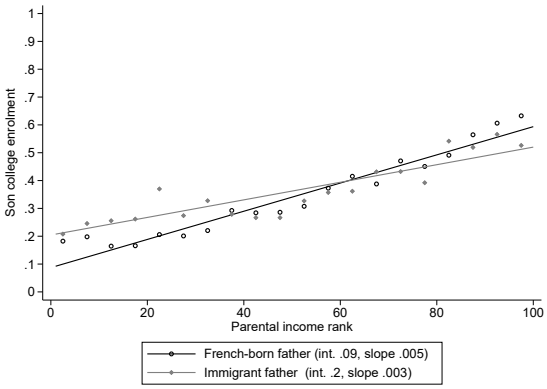
Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.5.4.4 Educational mobility

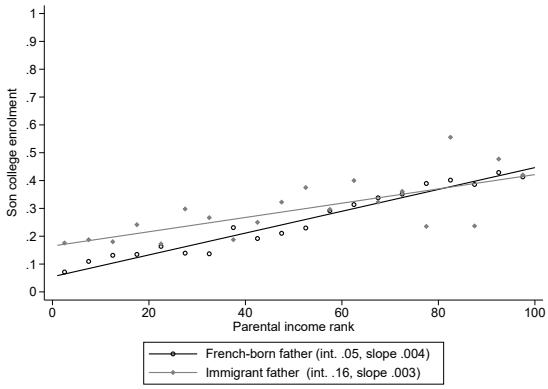
College enrolment

Figure C.5.32: Linked data: College graduation, France, comparison across cohorts

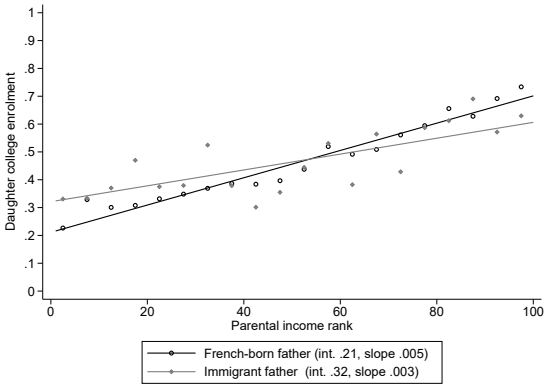
(a) France, sons, born 1986-1988



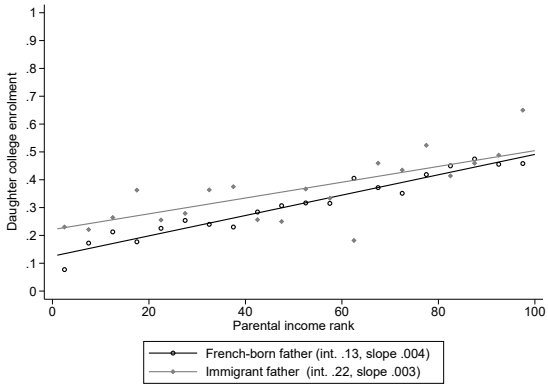
(b) France, sons, born 1992-1994



(c) France, daughters, born 1986-1988



(d) France, daughters, born 1992-1994



Notes: This figure plots estimates of Specification 1, regressing an indicator of college graduation on the income rank of parents. We use graduation as a proxy for enrolment because the structure of French Census Surveys does not allow us to observe enrolment at a given age. Children born in 1986-1988 and 1992-1994 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2003-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

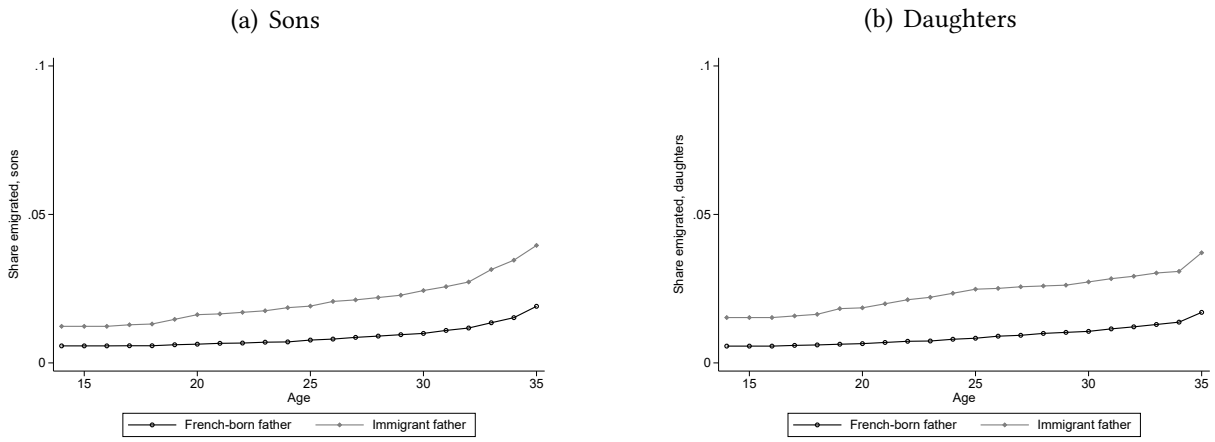
Primary school grades

School grades are not available in French linked data.

C.5.5 Robustness

C.5.5.1 Emigration

Figure C.5.33: France, cumulative share of emigrated children

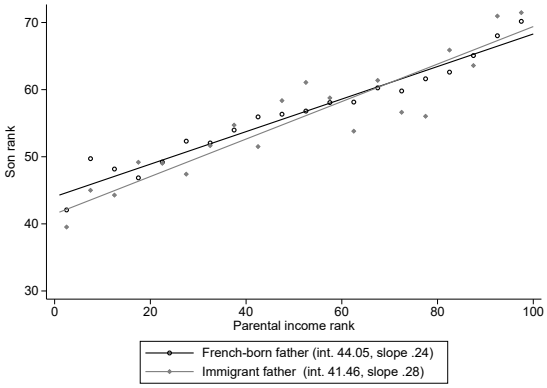


Notes: This figure shows the share of children who have emigrated (i.e. no longer living in France) across age groups. We consider all children who were part of the French population at age 14 and calculate the share of emigrated children as they age. If children move back to France after a period abroad, they are no longer counted as emigrants. Children born in 1978-1983. Immigration status is determined by father's country of birth.

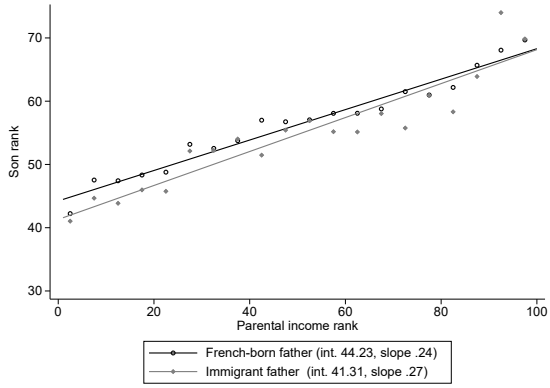
C.5.5.2 Additional years of parental income data

Figure C.5.34: Intergenerational mobility: France by number of years of parental income data

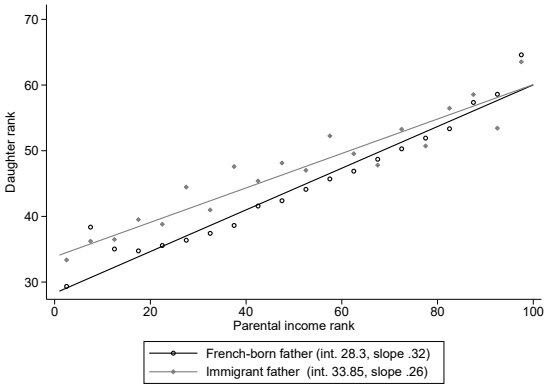
(a) Sons, parental income 1994-2000



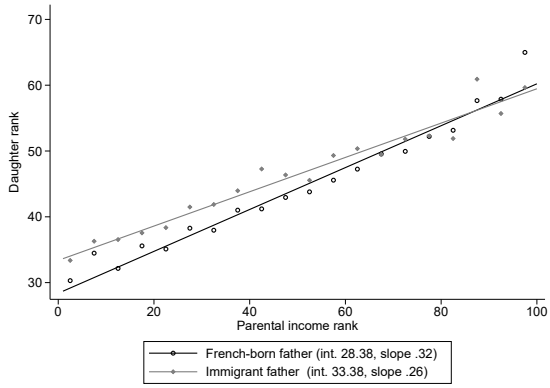
(b) Sons, parental income 1980-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1980-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1980-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.5.26: Intergenerational mobility estimates: France, parental income 1980-2000

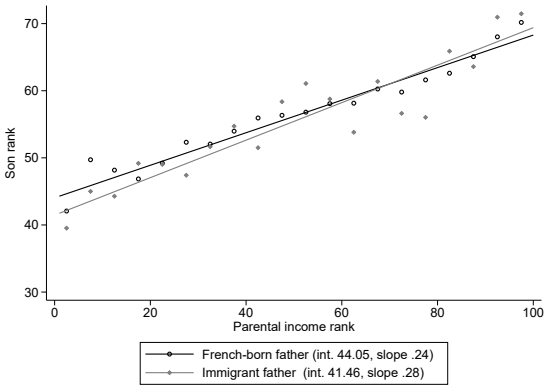
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-2.927***	4.995***
	(0.938)	(0.910)
Parents' rank	0.241***	0.318***
	(0.00783)	(0.00744)
Immigrant father # rank	0.0278	-0.0575***
	(0.0197)	(0.0192)
Constant	44.23***	28.38***
	(0.456)	(0.426)
Observations	19,535	19,373
R-squared	0.065	0.098

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1980-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

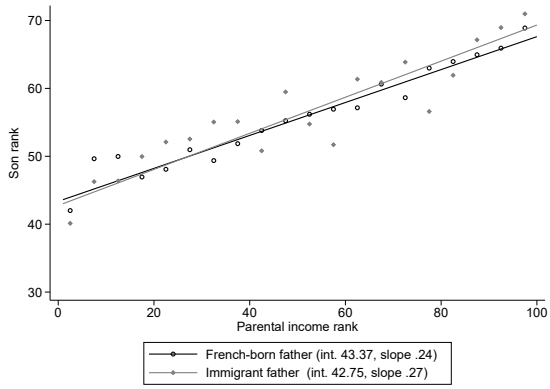
C.5.5.3 More recent birth cohorts, income rank

Figure C.5.35: Linked data: Intergenerational mobility, France, comparison across cohorts

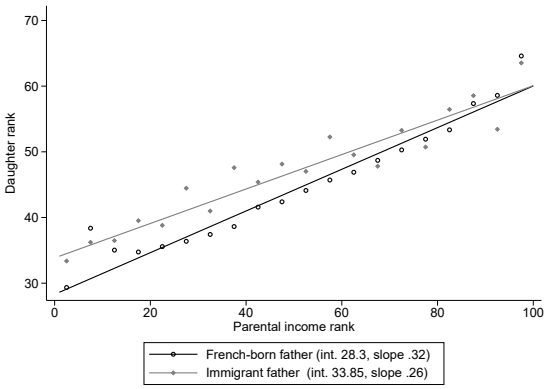
(a) France, sons, born 1978-1983



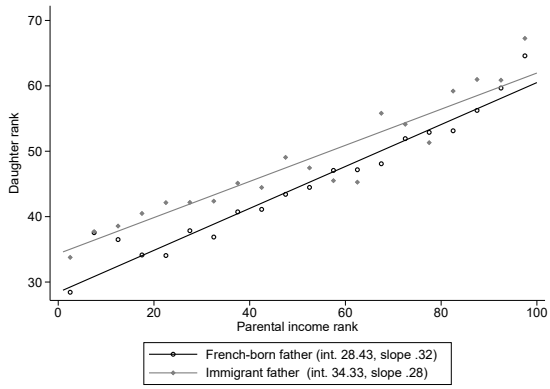
(b) France, sons, born 1982-1987



(c) France, daughters, born 1978-1983



(d) France, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.5.27: Linked data: Intergenerational mobility estimates, France, comparing cohorts

	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-2.583***	5.547***	-0.620	5.901***
	(0.920)	(0.892)	(0.938)	(0.872)
Parents' rank	0.242***	0.317***	0.243***	0.321***
	(0.00795)	(0.00756)	(0.00814)	(0.00755)
Immigrant father # rank	0.0369*	-0.0550***	0.0233	-0.0444**
	(0.0196)	(0.0192)	(0.0208)	(0.0197)
Constant	44.05***	28.30***	43.37***	28.43***
	(0.466)	(0.437)	(0.481)	(0.440)
Observations	19,535	19,373	19,551	19,418
R-squared	0.065	0.096	0.060	0.099

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.6 Country-specific details & results: Germany

C.6.1 Data details and deviations

We use two different data sets for the cross-sectional and linked analysis since a linked administrative dataset is not available for Germany. The Micro-census is used to construct the cross-sectional analysis and the German Socio-economic Panel (GSOEP) is used to create a linked parent-child dataset.

Microcensus. The microcensus is the biggest annual household survey in Germany. Since 1957, it has been conducted yearly by the federal and state statistical offices. Around 810,000 people in 370,000 private households are interviewed, representing around one percent of the German population. There is demographic information on their nationality and immigration history, as well as information about their incomes as well as working and living conditions.

GSOEP. The German Socio-Economic Panel is a representative longitudinal survey of private households starting in 1984. The data provides information on every member of the household and allows linking information for a subset of parents and children. Topics like migration background, education, employment, and earnings are covered in the survey. We use all available data, ranging from 1984 to 2020.

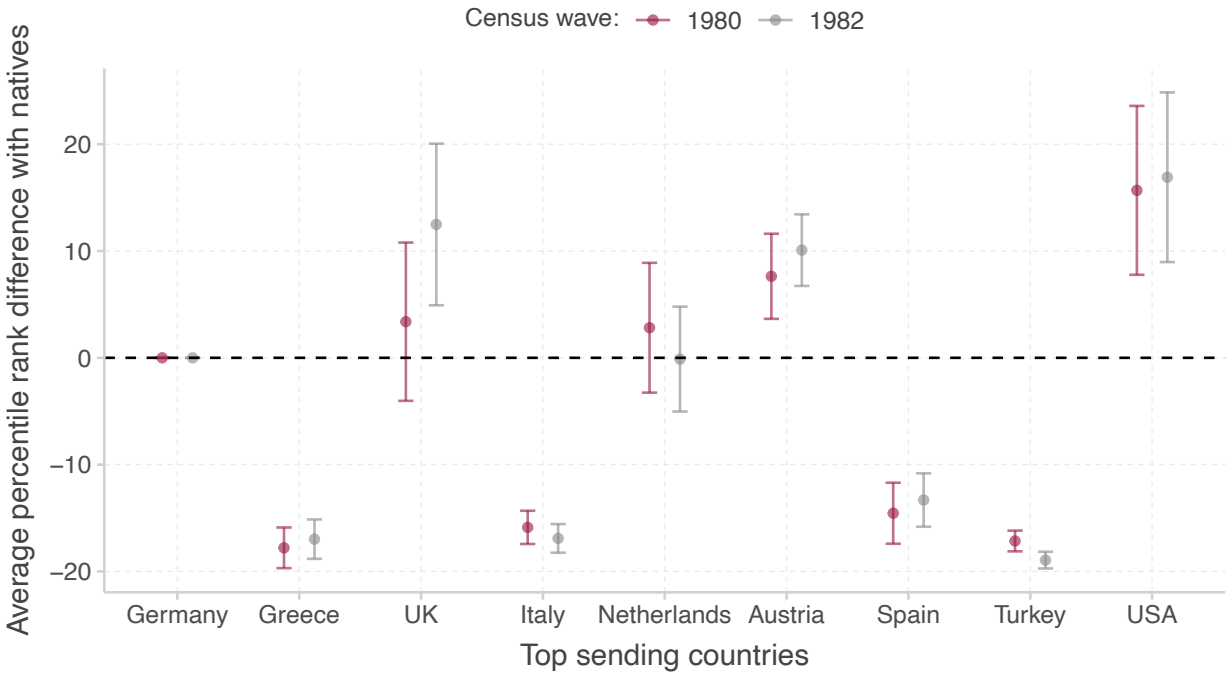
Data access. For the Microcensus, we use standardized versions of the full datasets (scientific use files) generated by the Research Data Centers. This data can only be used by researchers who are employed by a research institution that is registered and located in Germany and has been granted data access. A fee is charged to the user for each survey year accessed. Further information on access can be found on the official website: https://www.forschungsdatenzentrum.de/en/access. The GSOEP data can be accessed by individuals affiliated with a research institution after submitting an application and signing a contract with DIW Berlin. Further information on access can be found on the following website: https://www.diw.de/en/diw_01.c.601584.en/data_access.html#c_diw_01.c.741351.de

C.6.1.1 Cross-sectional data

First-generation sample. We use the 1982 Mikrozensus to identify fathers between the age of 30-50 in Germany, either born there or in a top sending country. This wave is used instead of the 1980 wave as the 1980 wave only has birth information on country groupings and very few big sending countries are ungrouped. We compare the income-rank gaps between immigrants and natives for some of the big countries which we can identify in both Mikrozensuses in Figure C.6.1.

Immigration status is based on the country of origin. The income sources in the Mikrozensus are intervals of the net total income of each household member. We take the midpoint of the interval as the income measure, exchange it from the German currency at the time (Deutsche Mark) and deflate it to arrive at the final measure. Following the same specification as for the Netherlands, we assign an income of zero to missing values, but we also compare this approach to coding only 'No income' as zero. The differences are not large so we use the coding of all missing values as zeros in our main specification. The comparison between the two approaches is shown in Figure C.6.2

Figure C.6.1: Sample waves comparison, Germany

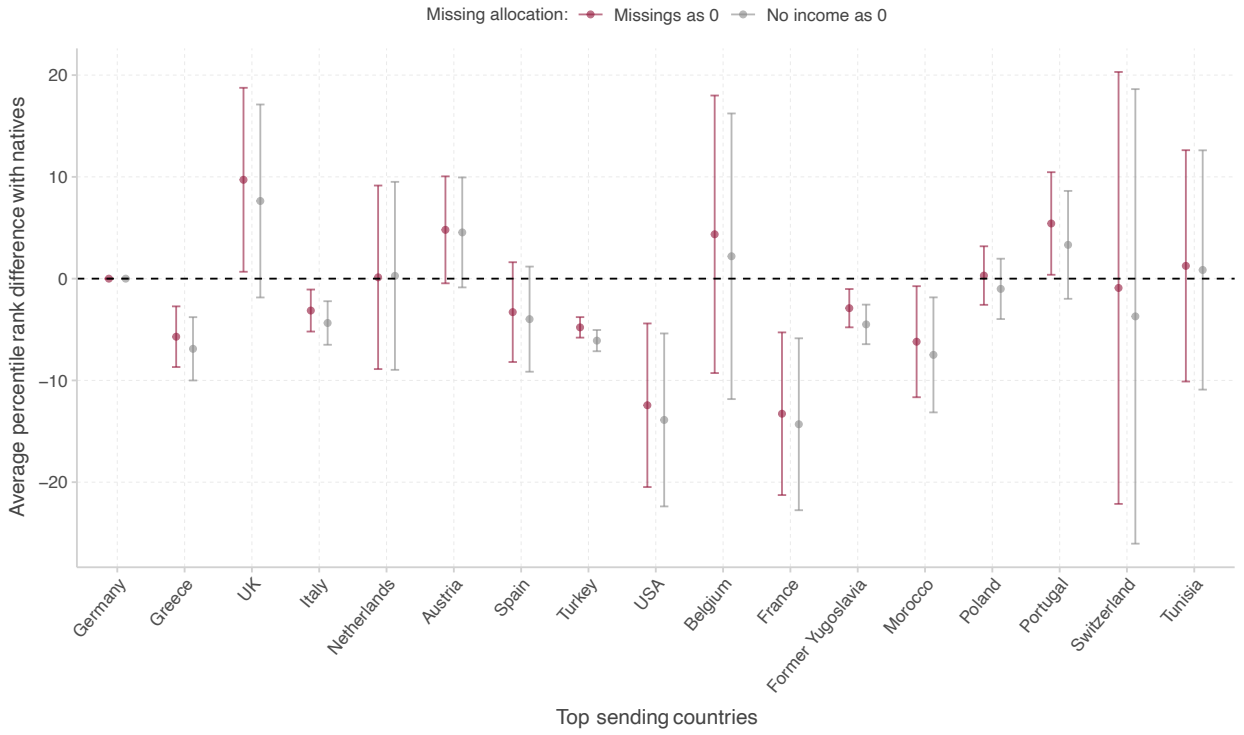


Second-generation sample. We merge the Mikrozensus from 2009 and 2013 to create the sample of sons aged 30 to 50 in Germany. The children are all born in Germany, but their fathers could be born in Germany or one of the top sending countries. The income is retrieved similarly as for the first-generation, but the measures for sons are in euros so no exchange rate is applied, only deflation. We check again whether the results are sensitive to coding missing values as zeros or only coding 'no income' as zero. The results are shown in Figure C.6.3

C.6.1.2 Linked data

Since the German linked analysis is based on a survey dataset, the number of observations in all years is quite low. For that reason, we do not make a year restriction in the data and instead include all observations from the SOEP dataset under the age of 65. We drop missing income values as it is not certain that it means these people had no income. For both parents and children we use the measure of household post-governmental income, which includes the household labor income and government transfers and excludes taxes (the variable 'i11102' in the dataset). The panel dataset intends to follow people yearly, but they may be observed at different points in time, have gaps in their responses for some years, or drop out of the survey for many reasons. This is another reason we do not restrict to certain years, but rather consider all the years in which the individual has reported their income (other than reportings over the age 65). For children, only observations over 30 years old are taken into account. We note that the selection of immigrant households into the German Socio-Economic Panel is more positive than in the full cross-section (compare the 14.7 rank point gap between immigrant fathers and local-born fathers in Table C.6.4

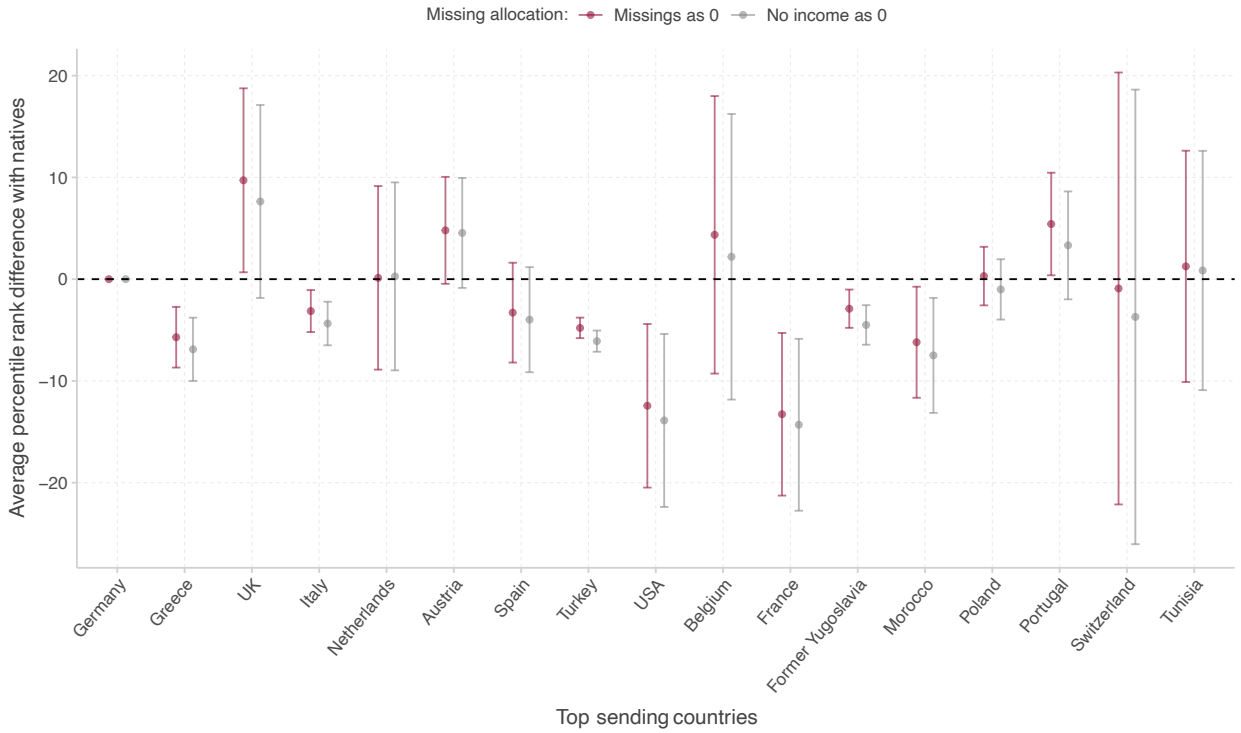
Figure C.6.2: Different approaches to dealing with missing values, Germany (1982 Mikrozensus)



to the 6.5 rank point gap in Table C.6.2.

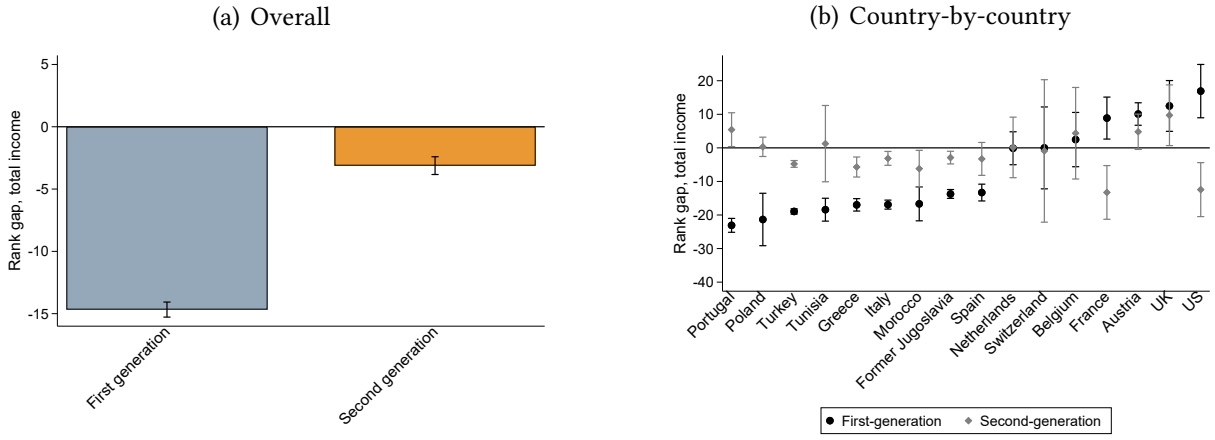
The dataset contains two variables that identify the parental IDs if the parents are also observed in the dataset (namely the variables fnr and mnr). As parents and children are only linked when a permission has been obtained, we do not observe too many direct links which leaves us with a limited dataset. The father's and children's country of origin is observed in the data (variable corigin) and used to determine the immigration status.

Figure C.6.3: Different approaches to dealing with missing values, Germany (2009/13 Mikrozensus)



C.6.2 Cross-sectional results

Figure C.6.4: Cross-sectional results using earnings: Germany, 1982-2009/13 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1982 and 2009 plus 2013 respectively. We use measures of earnings for both generations. Panel a) includes a non-German dummy rather than country-of-origin dummies. Immigration status is determined by father's country of origin. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.6.1: Cross-sectional data: Summary statistics, Germany

Fathers: 1982 cohort

	Immigrants	German-born	Diff.	Std. Error
Age	39.209	40.579	1.370***	0.075
Rank gap, total income	36.732	51.405	14.674***	0.369
ln(total income)	8.096	8.307	0.211***	0.006
Share of population	0.096	0.904		
N	6555	61885		

Sons: 2009/2013 cohort

	Immigrants	German-born	Diff.	Std. Error
Age	38.448	41.243	2.911***	0.079
Rank gap, total income	46.181	49.731	3.120***	0.387
ln(total income)	7.505	7.636	0.124***	0.009
Share of population	0.044	0.956		
N	5798	124975		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1982 and 2009/13 respectively. This is cross-sectional data, therefore the sons are not necessarily the sons of the fathers observed 30 years earlier due to compositional changes and return migration. Immigration status is determined by father's country of origin. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.6.3 Main results

C.6.3.1 Summary statistics

Table C.6.2: Linked data: Summary statistics, Germany

Sons

	Immigrant father	German-born father	Diff.	Std. Error
Child age	30.107	30.280	0.173*	0.091
Child income rank	47.603	50.836	3.233	2.186
Child labour force part.	0.920	0.934	0.014	0.015
Mother's age at child birth	27.137	26.662	-0.476	0.401
Father's age at child birth	30.864	29.341	-1.523***	0.425
Parental income rank	45.415	51.900	6.484***	2.158
Child share of population	0.117	0.883		
N	206	1558		

Daughters

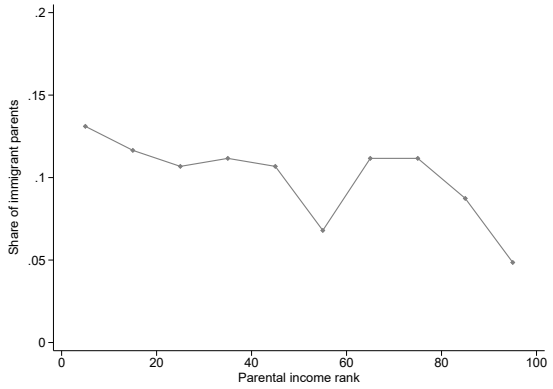
	Immigrant father	German-born father	Diff.	Std. Error
Child age	30.108	30.178	0.070	0.087
Child income rank	47.405	49.731	2.326	2.330
Child labour force part.	0.795	0.856	0.061***	0.022
Mother's age at child birth	26.686	26.472	-0.214	0.414
Father's age at child birth	31.063	29.315	-1.748***	0.461
Parental income rank	43.177	49.377	6.200***	2.352
Child share of population	0.119	0.881		
N	176	1300		

Notes: This table reports summary statistics of the estimation sample. Immigration status is determined by father's country of origin. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

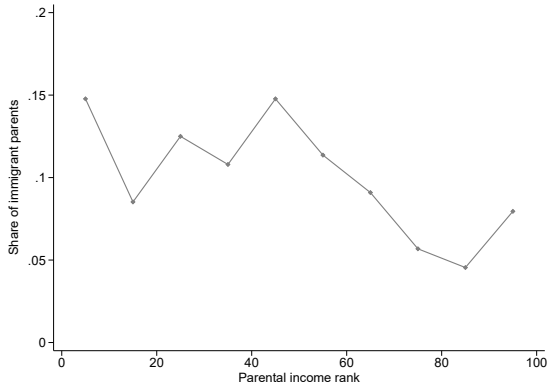
C.6.3.2 Parental income distribution

Figure C.6.5: Linked data: Germany, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

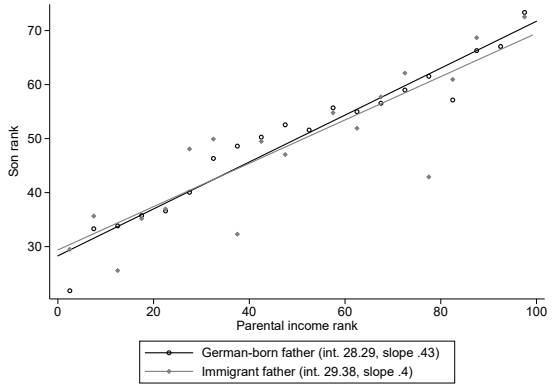


Notes: This figure shows the share of children of immigrant parents in each decile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each decile. The denominator is the total number of children with immigrant parents (across all deciles). Immigration status is determined by father's country of origin. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Income ranks, 0-100, determined within child cohorts. Due to sample size limitations, we do this graph for deciles instead of ventiles in the German case. The graph for ventiles can be found in the German folder.

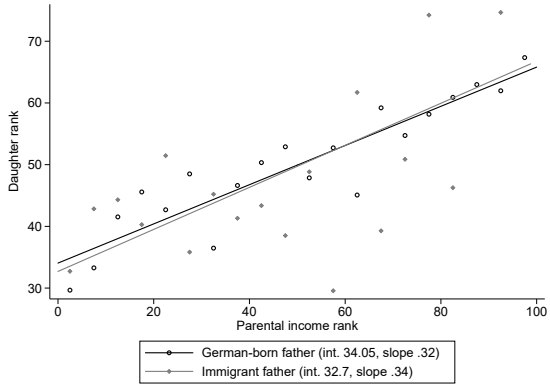
C.6.3.3 Rank-rank relationship

Figure C.6.6: Linked data: Intergenerational mobility, Germany

(a) Germany, sons



(b) Germany, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts.

Table C.6.3: Linked data: Intergenerational mobility estimates, Germany

Dependent variable: Child income rank	(1) Sons	(2) Daughters
Immigrant father = 1	1.091	-1.353
	(3.538)	(3.875)
Parents' rank	0.434***	0.318***
	(0.0233)	(0.0257)
Immigrant father # rank	-0.0332	0.0231
	(0.0672)	(0.0776)
Intercept	28.29***	34.05***
	(1.309)	(1.451)
Observations	1,761	1,475
R-squared	0.182	0.105

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.6.3.4 Oaxaca-Blinder decomposition

Table C.6.4: Oaxaca-Blinder decompositions, child income rank, Germany

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Immigrant father	47.60***	47.60***	47.60***	47.41***	47.41***	47.41***
	(2.016)	(2.024)	(2.024)	(2.184)	(2.195)	(2.195)
No immigrant father	50.84***	50.84***	50.84***	49.73***	49.73***	49.73***
	(0.749)	(0.749)	(0.749)	(0.805)	(0.805)	(0.805)
Difference	−3.233	−3.233	−3.233	−2.326	−2.326	−2.326
	(2.151)	(2.158)	(2.158)	(2.328)	(2.338)	(2.338)
Total explained	−2.793***	−2.817***	−2.602***	−1.984***	−1.969***	−2.112**
	(0.917)	(0.926)	(0.938)	(0.721)	(0.718)	(0.879)
Total unexplained	−0.439	−0.416	−0.631	−0.342	−0.357	−0.214
	(1.978)	(1.983)	(2.054)	(2.213)	(2.220)	(2.306)
- Parental income rank	−1.530	−1.507	−1.722	1.011	0.996	1.139
	(3.097)	(3.062)	(3.498)	(3.395)	(3.362)	(3.845)
- Constant	1.091	1.091	1.091	−1.353	−1.353	−1.353
	(3.535)	(3.549)	(3.549)	(3.871)	(3.889)	(3.889)
Observations	1,761	1,761	1,761	1,475	1,475	1,475

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

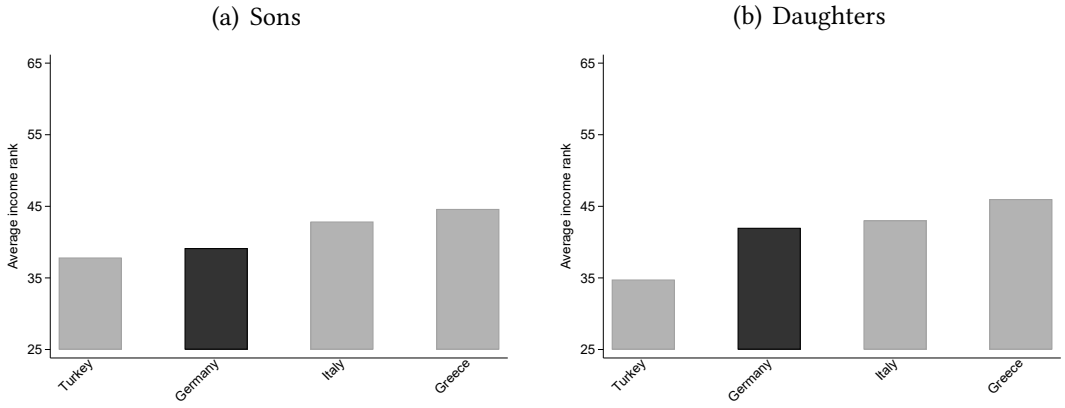
C.6.4 Mechanisms

C.6.4.1 Various sets of controls

This analysis cannot be done in the case of Germany due to the limited number of observations, and limited availability of the controls in the data.

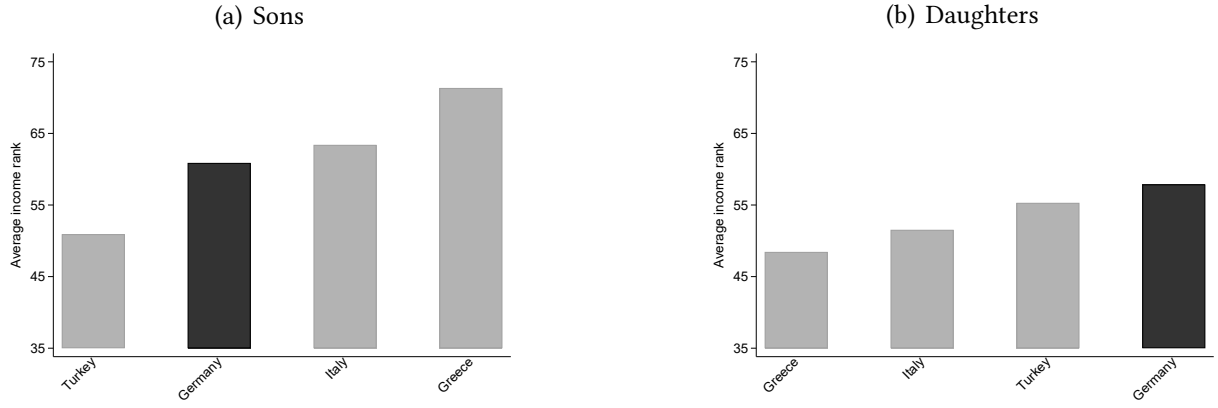
C.6.4.2 Heterogeneity across sending countries

Figure C.6.7: Average income at 25th percentile: Germany



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts. The observation numbers the bins are based on are as follows: Sons - Turkey (48), Germany (1558), Italy (41), Greece (22); Daughters - Turkey (42), Germany (1300), Italy (39), Greece (22).

Figure C.6.8: Average income at 75th percentile: Germany



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts. The observation numbers the bins are based on are as follows: Sons - Turkey (48), Germany (1558), Italy (41), Greece (22); Daughters - Greece (22), Italy (39), Turkey (42), Germany (1300).

C.6.4.3 Employment

We present the results from using child employment as the dependent variable below. Due to the small number of observations, the coefficient estimates for immigrants are quite dispersed. We include the same results using deciles instead of ventiles in the Germany folder.

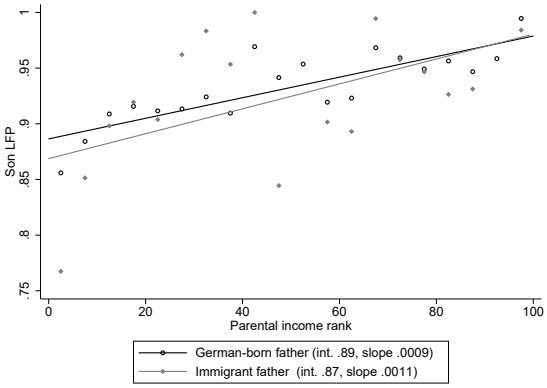
Table C.6.5: Linked data: Intergenerational mobility estimates, employment, Germany

	(1)	(2)
VARIABLES	Sons	Daughters
Immigrant father = 1	-0.0178	-0.00138
	(0.0363)	(0.0462)
Parents' rank	0.000923***	0.000860***
	(0.000188)	(0.000260)
Immigrant father # rank	0.000195	-0.00127
	(0.000575)	(0.000960)
Constant	0.886***	0.814***
	(0.0128)	(0.0155)
Observations	1,761	1,475
R-squared	0.018	0.013

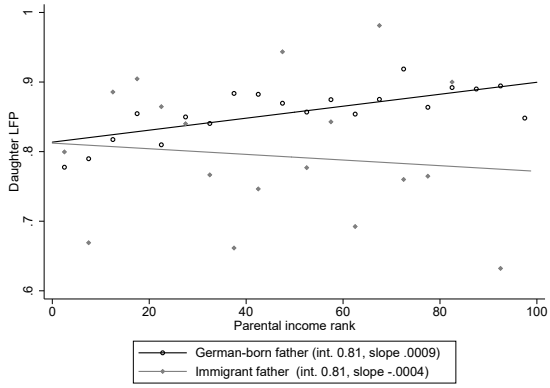
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.6.9: Linked data: Intergenerational mobility, employment, Germany

(a) Germany, sons



(b) Germany, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Immigration status is determined by father's country of origin. Income ranks, 0-100, determined within cohorts.

C.6.4.4 Educational mobility

College attainment

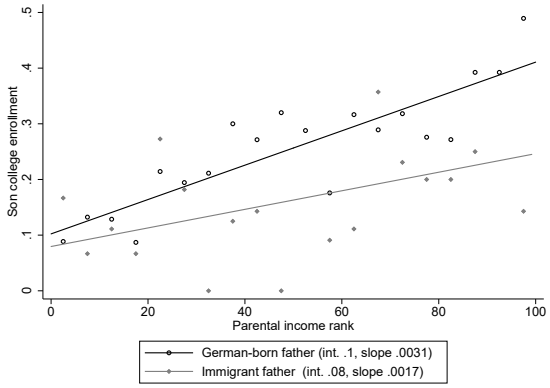
The German linked data only provides a variable to indicate if a person has finished college education or not. Thus, pinpointing the exact time when a person was in college is not possible in the setting. This also leaves out people who have attended college at some point but have not finished it, and only considers children who have attained a college degree. As in previous analyses, all children from all birth cohorts in the dataset are considered due to the small sample size.

In the German data, we define college attainment as individuals who completed a university degree or any degree from an institute of higher education. We perform the analysis similarly to the Danish case with this outcome variable.

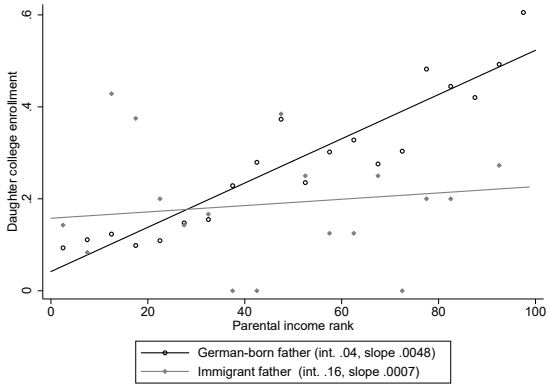
We present the results below. Due to the small number of observations, the coefficient estimates for immigrants are quite dispersed.

Figure C.6.10: Linked data: College degree attainment, Germany

(a) Germany, sons



(b) Germany, daughters



Notes: This figure plots estimates of Specification 1, regressing an indicator of college attainment on the income rank of parents. Immigration status is determined by father's country of origin. Due to low numbers of observations (see C.6.1.2), all available data on child income and parental income is used. Parental income ranks, 0-100, are determined within cohorts.

Primary school grades

Primary school grades are not available in the German data.

C.6.5 Robustness

C.6.5.1 Emigration

Data on children who emigrated is not available in the German case.

C.6.5.2 Additional years of parental income data

The German case considers all available income information for parents due to the limited availability of data. Different people are also observed in different years, so considering all the information increases our final sample. Thus, this additional analysis is not possible in the German case.

C.6.5.3 More recent birth cohorts, income rank

The German case considers all available income information for children due to the limited availability of data. Different people are also observed in different years, so considering all the information increases our final sample. Thus, this additional analysis is not possible in the German case.

C.7 Country-specific details & results: Israel

C.7.1 Data details and deviations

We rely on a number of administrative registers supplied by the Israeli Central Bureau of Statistics to construct the relevant datasets on children and parents.

C.7.1.1 Cross-sectional data

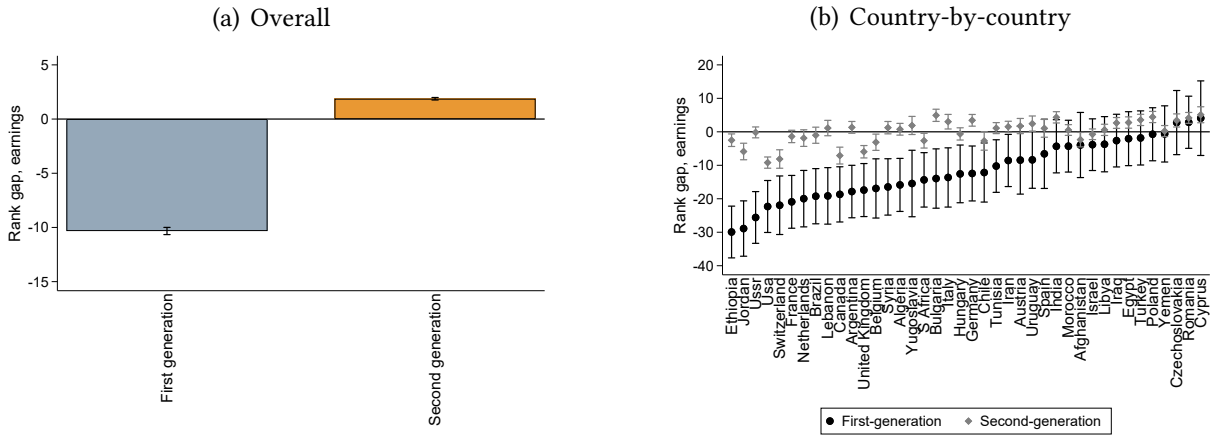
We use the population register for information on sex, birth year, countries of birth, and children. The measure of paternal labor income is from the 1987 income tax data. We use same population register data to identify sons and their age. The measure of sons' labor income is from the 2019 income tax data.

C.7.1.2 Linked data

We use the population register for information on sex, birth year, countries of birth, and parents identifiers. Child labor income from 2014-2015 and parental labor income from 1994-2000 is from the income tax data.

C.7.2 Cross-sectional results

Figure C.7.1: Cross-sectional results using earnings: Israel, 1987-2019 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1987 and 2019 respectively. We use measures of earnings for both generations. Panel a) includes a non-Israel dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.7.1: Cross-sectional data: Summary statistics, Israel

Fathers: 1987 cohort

	Immigrants	Danish-born	Diff.	Std. Error
Age	34.251	32.906	-1.345***	0.021
Rank gap, earnings	43.860	54.188	10.328***	0.170
ln(earnings)	9.412	9.401	-0.010	0.010
Earnings > 0	0.416	0.631	0.215***	0.003
Share of population	0.405	0.595		
N	42193.000	61862.000		

Sons: 2019 cohort

	Immigrant father	Danish-born father	Diff.	Std. Error
Age	41.206	38.493	-2.713***	0.012
Rank gap, earnings	51.136	49.263	-1.873***	0.058
ln(earnings)	11.832	11.594	-0.239***	0.003
Earnings > 0	0.657	0.684	0.027***	0.001
Share of population	0.393	0.607		
N	392121.000	604598.000		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1987 and 2019 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.7.3 Main results

C.7.3.1 Summary statistics

Table C.7.2: Linked data: Summary statistics, Israel

Sons

	Immigrant father	Israeli-born father	Diff.	Std. Error
Child age	34.074	33.762	-0.312***	0.009
Child labour income rank	58.869	54.794	-4.075***	0.129
Child labour force part.	0.955	0.951	-0.005***	0.001
Mother's age at child birth	15.926	16.240	0.314***	0.009
Father's age at child birth	15.925	16.238	0.312***	0.009
Parental labour income rank	53.048	47.133	-5.915***	0.126
Child share of population	0.365	0.635		
N	82236.000	143272.000		

Daughters

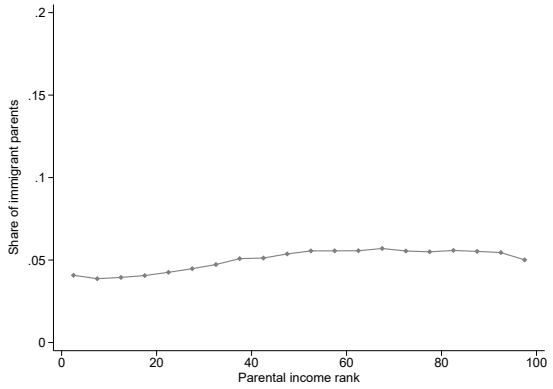
	Immigrant father	Israeli-born father	Diff.	Std. Error
Child age	34.085	33.757	-0.328***	0.009
Child labour income rank	45.099	42.461	-2.638***	0.117
Child labour force part.	0.954	0.943	-0.011***	0.001
Mother's age at child birth	15.915	16.245	0.330***	0.009
Father's age at child birth	15.914	16.242	0.329***	0.009
Parental labour income rank	52.465	49.609	-2.856***	0.126
Child share of population	0.394	0.606		
N	85896.000	132001.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income and wealth 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

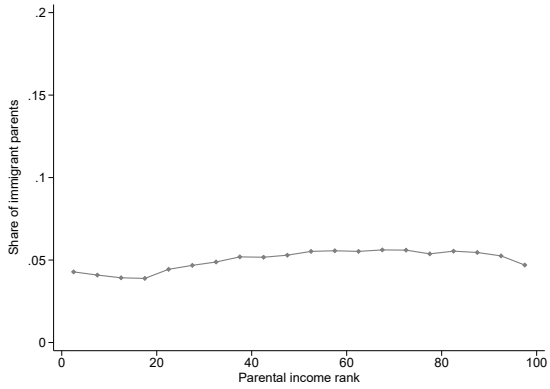
C.7.3.2 Parental income distribution

Figure C.7.2: Linked data: Israel, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

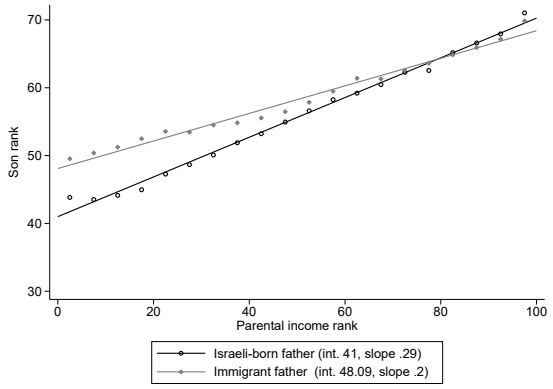


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

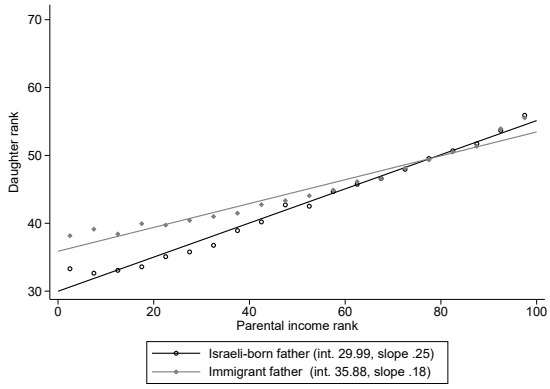
C.7.3.3 Rank-rank relationship

Figure C.7.3: Linked data: Intergenerational mobility, Israel

(a) Israel, sons



(b) Israel, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.7.3: Linked data: Intergenerational mobility estimates, Israel

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	7.090***	5.890***
	(0.256)	(0.232)
Parents' labour rank	0.293***	0.251***
	(0.00255)	(0.00249)
Immigrant father # rank	-0.0895***	-0.0757***
	(0.00443)	(0.00407)
Constant	41.00***	29.99***
	(0.138)	(0.139)
Observations	225,508	217,897
R-squared	0.072	0.061

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.7.3.4 Oaxaca-Blinder decomposition

Table C.7.4: Oaxaca-Blinder decompositions, child income rank, Israel

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: Immigrant father	58.87***	58.87***	58.87***	45.10***	45.10***	45.10***
	(0.102)	(0.102)	(0.102)	(0.0898)	(0.0898)	(0.0898)
Mean child income rank: No immigrant father	54.79***	54.79***	54.79***	42.46***	42.46***	42.46***
	(0.0778)	(0.0779)	(0.0779)	(0.0742)	(0.0742)	(0.0742)
Difference in means	4.075***	4.075***	4.075***	2.638***	2.638***	2.638***
	(0.128)	(0.128)	(0.128)	(0.116)	(0.116)	(0.116)
Total explained difference	1.551***	1.731***	1.202***	0.637***	0.718***	0.502***
due to differences in parental income distributions	(0.0349)	(0.0395)	(0.0332)	(0.0283)	(0.0321)	(0.0237)
Total unexplained difference	2.525***	2.344***	2.873***	2.001***	1.920***	2.136***
due to differences in mobility parameters	(0.126)	(0.126)	(0.127)	(0.114)	(0.114)	(0.114)
- Parental income rank (*relative mobility*)	-4.565***	-4.746***	-4.217***	-3.890***	-3.971***	-3.754***
	(0.226)	(0.235)	(0.209)	(0.209)	(0.214)	(0.202)
- Intercept (*absolute mobility*)	7.090***	7.090***	7.090***	5.890***	5.890***	5.890***
	(0.256)	(0.256)	(0.256)	(0.232)	(0.232)	(0.232)
Observations	225,508	225,508	225,508	217,897	217,897	217,897

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.7.4 Mechanisms

C.7.4.1 Various sets of controls

Table C.7.5: Linked data: Intergenerational mobility estimates with various sets of controls, Israel

VARIABLES	(1) Sons	(2) Sons	(3) Daughters	(4) Daughters
Immigrant father = 1	7.090***	6.478***	5.890***	5.209***
	(0.256)	(0.260)	(0.232)	(0.233)
Parents' labour rank	0.293***	0.295***	0.251***	0.247***
	(0.00255)	(0.00317)	(0.00249)	(0.00303)
Immigrant father # rank	-0.0895***	-0.0811***	-0.0757***	-0.0635***
	(0.00443)	(0.00447)	(0.00407)	(0.00408)
Constant	41.00***	39.83***	29.99***	23.31***
	(0.138)	(0.723)	(0.139)	(0.694)
Observations	225,508	225,508	217,897	217,897
R-squared	0.072	0.079	0.061	0.074
Parental region	0	0	0	0
Parental municipality	0	0	0	0
Parental wealth	0	0	0	0
Parental industry, 27 grp.	0	0	0	0
Parental industry, 2-digit	0	1	0	1

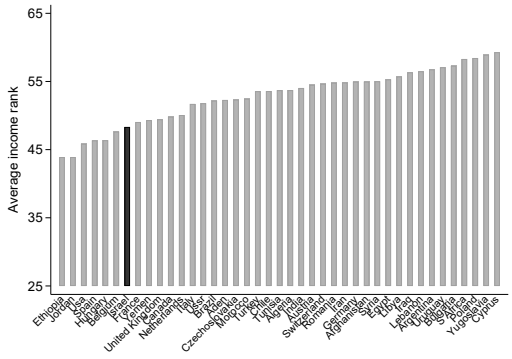
Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1994 and included as fixed effects. Parental industries include categories for unknown industry as well as no industry (if not working). Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.7.4.2 Heterogeneity across sending countries

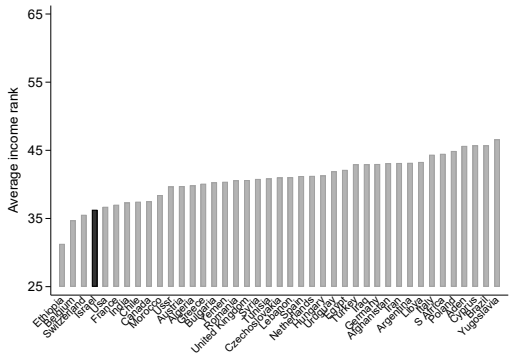
Compositions of sending countries may vary across destination countries. To check this, we can compare mobility parameters for each sending country across destination countries.

Figure C.7.4: Average income at 25th percentile: Israel

(a) Sons



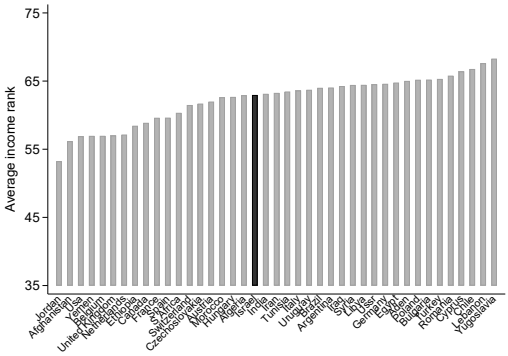
(b) Daughters



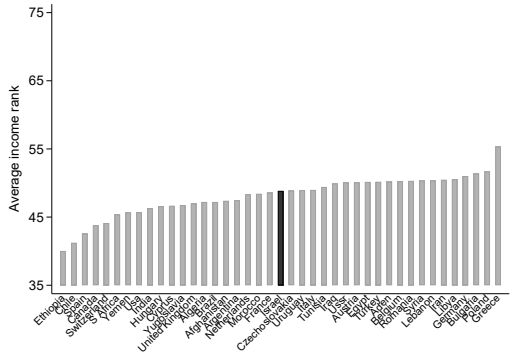
Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.7.5: Average income at 75th percentile: Israel

(a) Sons



(b) Daughters



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.7.4.3 Employment

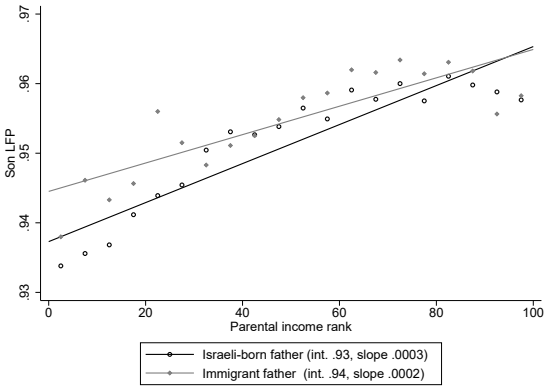
Table C.7.6: Linked data: Intergenerational mobility estimates, employment, Israel

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	0.00721***	0.0293***
	(0.00139)	(0.00147)
Parents' labour rank	0.000280***	0.000555***
	(1.36e-05)	(1.53e-05)
Immigrant father # rank	-7.62e-05***	-0.000374***
	(2.28e-05)	(2.37e-05)
Constant	0.937***	0.916***
	(0.000798)	(0.000962)
Observations	225,508	217,897
R-squared	0.003	0.008

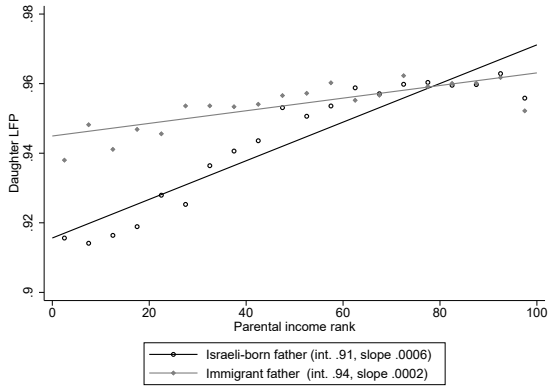
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.7.6: Linked data: Intergenerational mobility, employment, Israel

(a) Israel, sons



(b) Israel, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.7.4.4 Educational mobility

Because gaps in child income ranks may be due to both labour market conditions and due to differences in educational mobility, we now consider educational outcomes. Because labour market

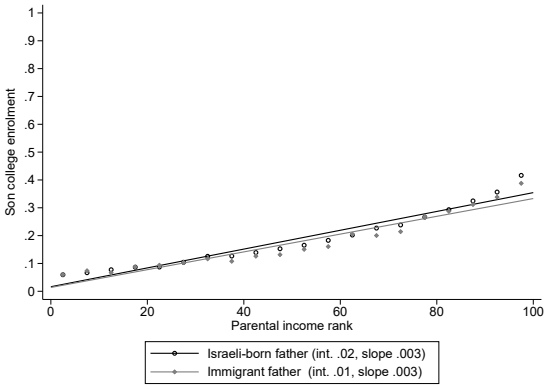
outcomes are only appropriately measured when children are sufficiently old, considering educational outcomes will also allow us to better understand the trajectories of more recent birth cohorts.

We consider a college degree measured as receiving any college degree prior to or in the calendar year a child turns 28.

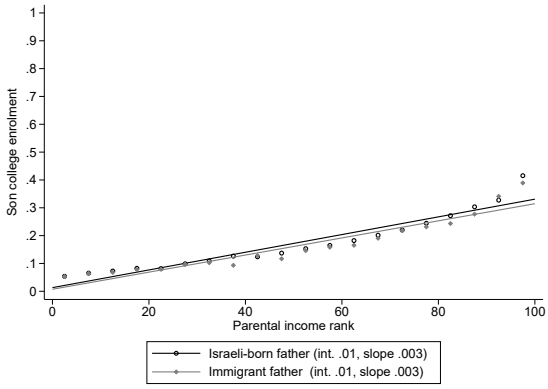
We see that the level of both absolute and relative mobility are similar for children with and without immigrant fathers, and they are stable over time.

Figure C.7.7: Linked data: College degree by age 28, Israel, comparison across cohorts

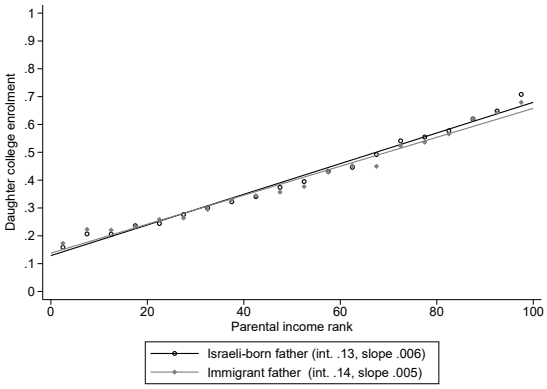
(a) Israel, sons, born 1986-1988



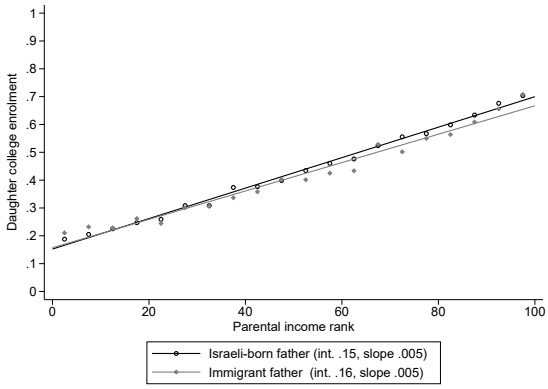
(b) Israel, sons, born 1989-1991



(c) Israel, daughters, born 1986-1988



(d) Israel, daughters, born 1989-1991



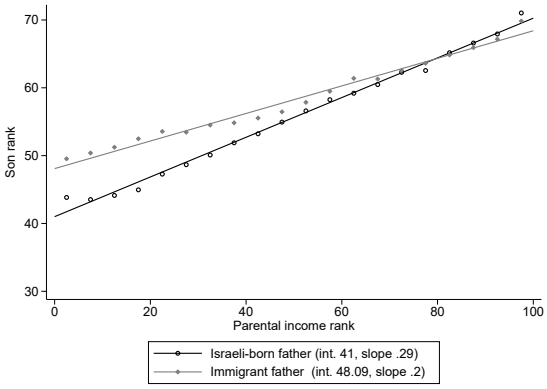
Notes: This figure plots estimates of Specification 1, regressing an indicator of college degree in the year the children turn 28 or earlier on the income rank of parents. Children born in 1986-1988 and 1989-1991 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2003-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

C.7.5 Robustness

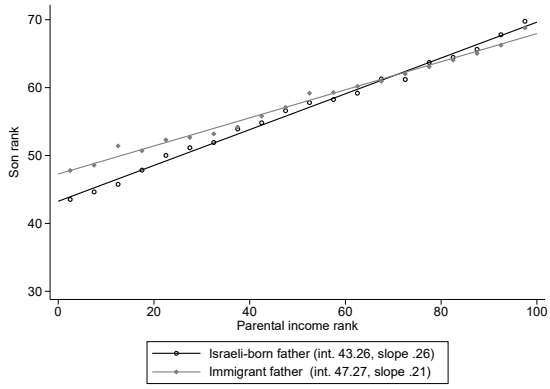
C.7.5.1 Additional years of parental income data

Figure C.7.8: Intergenerational mobility: Israel by number of years of parental income data

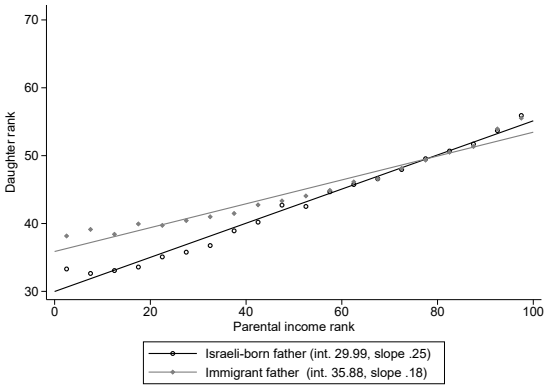
(a) Sons, parental income 1994-2000



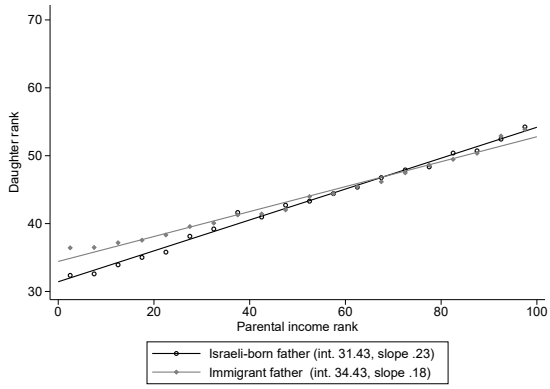
(b) Sons, parental income 1985-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1985-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1985-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.7.7: Intergenerational mobility estimates: Israel, parental income 1985-2000

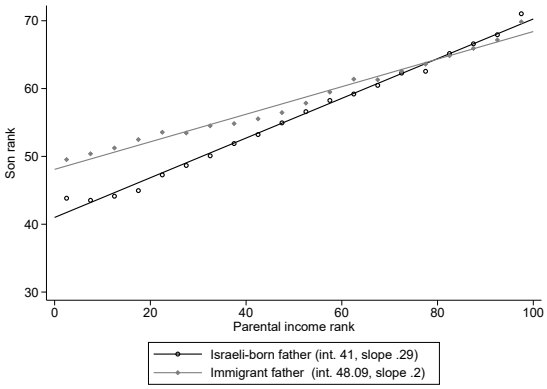
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	4.014***	2.992***
	(0.282)	(0.247)
Parents' rank	0.264***	0.228***
	(0.00306)	(0.00283)
Immigrant father # rank	-0.0570***	-0.0438***
	(0.00497)	(0.00447)
Constant	43.26***	31.43***
	(0.173)	(0.158)
Observations	171,264	172,792
R-squared	0.058	0.053

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1985-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

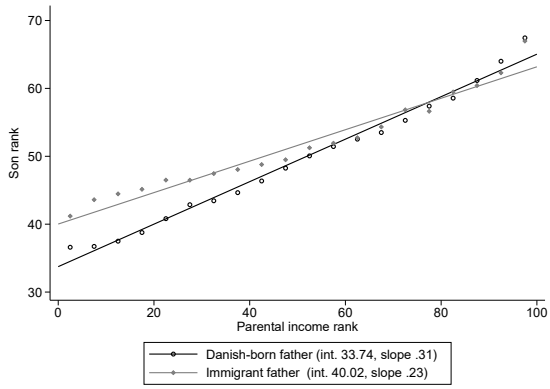
C.7.5.2 More recent birth cohorts, income rank

Figure C.7.9: Linked data: Intergenerational mobility, Israel, comparison across cohorts

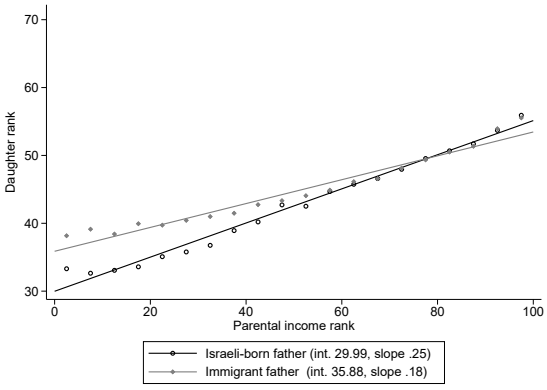
(a) Israel, sons, born 1978-1983



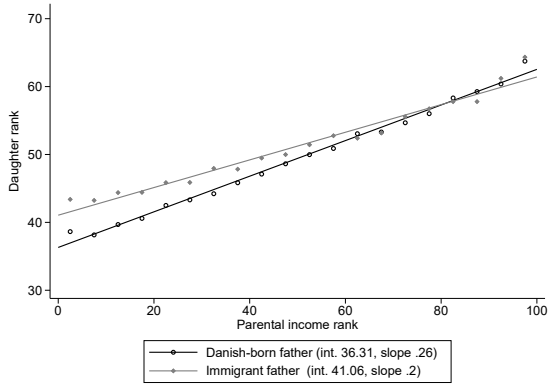
(b) Israel, sons, born 1982-1987



(c) Israel, daughters, born 1978-1983



(d) Israel, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.7.8: Linked data: Intergenerational mobility estimates, Israel, comparing cohorts

	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	7.090***	5.890***	6.273***	4.749***
	(0.256)	(0.232)	(0.292)	(0.286)
Parents' rank	0.293***	0.251***	0.313***	0.262***
	(0.00255)	(0.00249)	(0.00268)	(0.00281)
Immigrant father # rank	-0.0895***	-0.0757***	-0.0813***	-0.0587***
	(0.00443)	(0.00407)	(0.00505)	(0.00498)
Constant	41.00***	29.99***	33.74***	36.31***
	(0.138)	(0.139)	(0.147)	(0.160)
Observations	225,508	217,897	179,610	177,624
R-squared	0.072	0.061	0.087	0.061

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.8 Country-specific details & results: Italy

C.8.1 Data details and deviations

The data source is the Electronic Database of Personal Income Tax Returns maintained by the Department of Finance of the Italian Ministry of Economy and Finance and used in Acciari et al. (2022). The dataset allows to link children to their parents as explained below. It contains a range of demographic and income variables.

The database combines information from all three income tax forms available to Italian taxpayers: (i) form Modello Unico (MU), which is the most common; (ii) form 730, a simplified income tax form available to employees and pensioners whose income consists of only a few sources; and (iii) form 770, which is filled in by the withholding agent of employees, pensioners, and self-employed individuals and can be used when the taxpayer has only one source of income, no other properties than their primary home, and no itemized deductions.[51]

The demographic variables in the dataset include province of birth (or whether the individual was born abroad), municipality and province of residence, birth year, and marital status. The income variables include total gross income and all its components, namely wages, self-employment income from businesses and farms, income from financial assets, housing, and land, unemployment benefits, and retirement income. A few income sources are unobserved in the Italian data, namely some forms of financial income (such as interest on bonds and deposits), income form fellowships and scholarships, child and family benefits, and social assistance transfers.

Data access. The Electronic Database of Personal Income Tax Returns is confidential. Researchers interested in accessing it may contact the Italian Ministry of Economy and Finance at urp@mef.gov.it and propose a joint research project. Access is not guaranteed, as the Ministry needs to have an interest to engage in the project and available resources to carry it out.

C.8.1.1 Cross-sectional data

No data that meets all the requirements of the cross-sectional analysis is available for Italy.

C.8.1.2 Linked data

Sample definition. Linking parents and children in the database is possible starting from 1998. This is the first year in which parents had to report their children's Social Security Numbers (SSN) on their own tax returns to claim deductions for dependent children. Data for parents is taken from tax returns of years 1998, 1999, and 2000 by selecting all taxpayers who claim allowances for children born between 1979 and 1983. Then, through children's SSNs, we recover their tax returns when they are adult in years 2014 and 2016.[52][53] Each record in our dataset

[51] E.g. medical expenses, charitable donations, mortgage interest. Standard deductions such as allowances for children and dependent spouses are applied by the withholding agent.

[52] The small differences relative to other countries in the years of data being used are due to the extraction of the Personal Income Tax Returns database made available to Acciari et al. (2022). For instance, while other countries use child income in 2014 and 2015, 2015 is not available in the Italian data and the closest year is 2016.

[53] Specifically, parents-children relationships can be identified because a taxpayer must indicate on the form the name and SSN of the spouse and the SSN and relationship for each of the dependents for whom a deduction is

contains information on a child, their father, and their mother. The resulting dataset comprises of 1,871,474 records.

First- and second-generation income. Income is total gross income reported in the tax data.

Immigration status. While the foreign country of birth is not available in the Italian data, a flag is provided if the individual was not born in Italy. This is how the immigration status is defined.

Other deviations. Labor force participation of children is constructed based on wages of children in 2017 – not 2014 or 2016 – since this is the only year of data for which we have child income components. For labour force participation, we use wages only, because self-employment income can be negative in the Italian data. Furthermore, Italian data does not include information on wealth. However, for the first year of parental data available – 1998 – we have capital income data and use this instead of wealth.

claimed. Even if spouses are separated or divorced and live apart, we can retrace couples when they both claim a positive percentage of deduction for the same individual SSN. If only one adult claims a 100 percent deduction and there is no information about the spouse on the tax return, we conclude that that taxpayer is a single parent.

C.8.2 Main results

C.8.2.1 Summary statistics

Table C.8.9: Linked data: Summary statistics, Italy

Sons

	Immigrant father	Italian-born father	Diff.	Std. Error
Child age	32.360	32.421	0.061***	0.014
Child income rank	57.538	55.423	-2.115***	0.238
Child labour force part.	0.793	0.791	-0.003	0.003
Mother's age at child birth	28.170	27.760	-0.411***	0.049
Father's age at child birth	31.514	31.279	-0.235***	0.044
Parental income rank	54.541	49.358	-5.183***	0.234
Parental wealth rank, 1998	49.837	49.911	0.073	0.232
Child share of population	0.016	0.984		
N	15545.000	952548.000		

Daughters

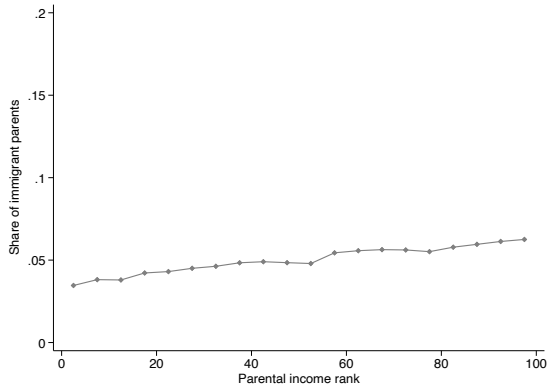
	Immigrant father	Italian-born father	Diff.	Std. Error
Child age	32.406	32.470	0.064***	0.014
Child income rank	46.106	44.119	-1.987***	0.223
Child labour force part.	0.842	0.838	-0.004	0.003
Mother's age at child birth	27.962	27.740	-0.222***	0.050
Father's age at child birth	31.413	31.306	-0.107**	0.045
Parental income rank	54.670	50.529	-4.141***	0.236
Parental wealth rank, 1998	48.684	50.121	1.437***	0.236
Child share of population	0.017	0.983		
N	15097.000	888284.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child earnings measured in 2014 and 2016, and parental earnings in 1998-2000. Wealth is proxied with capital income since Italian data does not include wealth. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

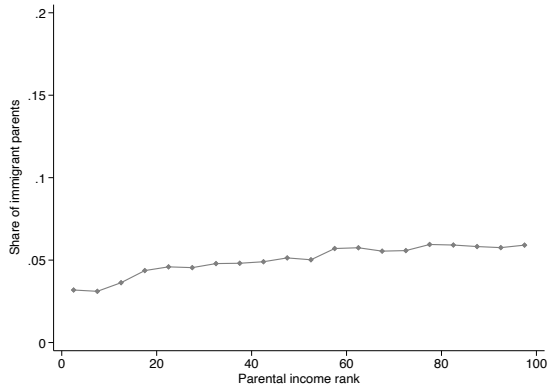
C.8.2.2 Parental income distribution

Figure C.8.10: Linked data: Italy, share of total number of children with immigrant parents

(a) Sons



(b) Daughters

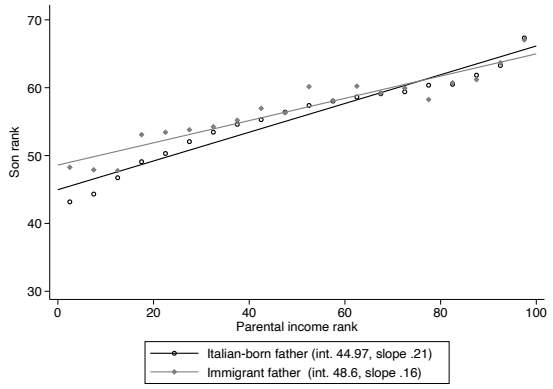


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1998-2000. Income ranks, 0-100, determined within child cohorts.

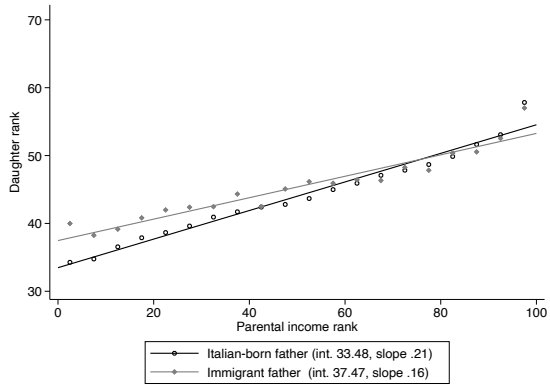
C.8.2.3 Rank-rank relationship

Figure C.8.11: Linked data: Intergenerational mobility, Italy

(a) Italy, sons



(b) Italy, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014 and 2016, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts.

Table C.8.10: Linked data: Intergenerational mobility estimates, Italy

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	3.632***	3.998***
	(0.514)	(0.478)
Parents' rank	0.212***	0.211***
	(0.00104)	(0.000997)
Immigrant father # rank	-0.0479***	-0.0527***
	(0.00863)	(0.00817)
Constant	44.97***	33.48***
	(0.0576)	(0.0551)
Observations	968,093	903,381
R-squared	0.043	0.050

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014 and 2016, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.8.2.4 Oaxaca-Blinder decomposition

Table C.8.11: Oaxaca-Blinder decompositions, child income rank, Italy

	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	57.54***	57.54***	57.54***	46.11***	46.11***	46.11***
	(0.240)	(0.240)	(0.240)	(0.222)	(0.222)	(0.222)
No immigrant father	55.42***	55.42***	55.42***	44.12***	44.12***	44.12***
	(0.0301)	(0.0301)	(0.0301)	(0.0288)	(0.0288)	(0.0288)
Difference	2.115***	2.115***	2.115***	1.987***	1.987***	1.987***
	(0.241)	(0.241)	(0.241)	(0.224)	(0.224)	(0.224)
Total explained	1.094***	1.098***	0.849***	0.869***	0.872***	0.654***
	(0.0487)	(0.0488)	(0.0582)	(0.0481)	(0.0483)	(0.0493)
Total unexplained	1.022***	1.018***	1.266***	1.118***	1.115***	1.333***
	(0.239)	(0.239)	(0.240)	(0.221)	(0.221)	(0.220)
- Parental income rank	−2.610***	−2.614***	−2.366***	−2.879***	−2.883***	−2.664***
	(0.470)	(0.471)	(0.426)	(0.446)	(0.447)	(0.413)
- Constant	3.632***	3.632***	3.632***	3.998***	3.998***	3.998***
	(0.514)	(0.514)	(0.514)	(0.478)	(0.478)	(0.478)
Observations	968,093	968,093	968,093	903,381	903,381	903,381

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014 and 2016, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.8.3 Mechanisms

C.8.3.1 Various sets of controls

Table C.8.12: Linked data: Intergenerational mobility estimates with various sets of controls, Italy

VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Daughters	(8) Daughters	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters
Immigrant father = 1	3.632***	2.018***	1.409***	3.711***	2.108***	1.512***	3.998***	2.205***	1.895***	4.242***	2.473***	2.182***
	(0.514)	(0.507)	(0.523)	(0.514)	(0.507)	(0.523)	(0.478)	(0.466)	(0.483)	(0.476)	(0.464)	(0.481)
Parents' rank	0.212***	0.164***	0.157***	0.209***	0.163***	0.155***	0.211***	0.173***	0.166***	0.196***	0.158***	0.152***
	(0.00104)	(0.00110)	(0.00114)	(0.00108)	(0.00113)	(0.00118)	(0.000997)	(0.00105)	(0.00109)	(0.00103)	(0.00107)	(0.00111)
Immigrant father # rank	-0.0479***	-0.0422***	-0.0363***	-0.0488***	-0.0432***	-0.0373***	-0.0527***	-0.0448***	-0.0404***	-0.0547***	-0.0470***	-0.0426***
	(0.00863)	(0.00852)	(0.00861)	(0.00863)	(0.00852)	(0.00861)	(0.00817)	(0.00802)	(0.00812)	(0.00814)	(0.00799)	(0.00809)
Constant	44.97***	46.27***	47.69***	40.90***	42.04***	43.77***	33.48***	36.39***	35.74***	29.40***	29.98***	28.29***
	(0.0576)	(0.119)	(0.0614)	(9.103)	(9.093)	(8.933)	(0.0551)	(0.109)	(0.0585)	(6.548)	(6.115)	(6.241)
Observations	968,093	968,093	968,093	968,093	968,093	968,093	903,381	903,381	903,381	903,381	903,381	903,381
R-squared	0.043	0.076	0.093	0.044	0.077	0.094	0.050	0.085	0.099	0.053	0.089	0.103
Parental region	0	1	0	0	1	0	0	1	0	0	1	0
Parental municipality	0	0	1	0	0	1	0	0	1	0	0	1
Parental wealth	0	0	0	1	1	1	0	0	0	1	1	1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014 and 2016, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1998 and included as fixed effects. We have 21 regions (treating separately the provinces of Trento and Bolzano) and 8,079 municipalities. Italian data does not include industry. Wealth is proxied with capital income since Italian data does not include wealth. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.8.3.2 Heterogeneity across sending countries

The specific country of origin is not available in the Italian data.

C.8.3.3 Employment

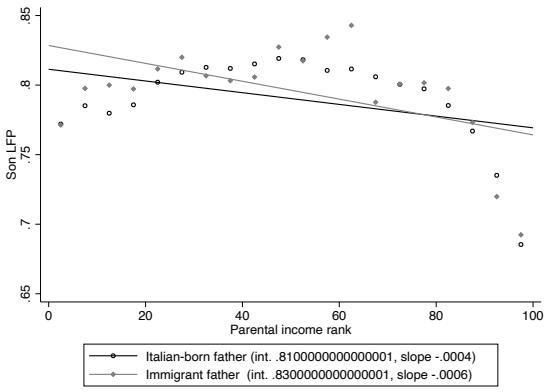
Table C.8.13: Linked data: Intergenerational mobility estimates, employment, Italy

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	0.0171**	0.0165**
	(0.00712)	(0.00653)
Parents' rank	-0.000421***	-0.000728***
	(1.50e-05)	(1.42e-05)
Immigrant father # rank	-0.000221*	-0.000180
	(0.000120)	(0.000113)
Constant	0.811***	0.875***
	(0.000835)	(0.000786)
Observations	968,093	903,381
R-squared	0.001	0.003

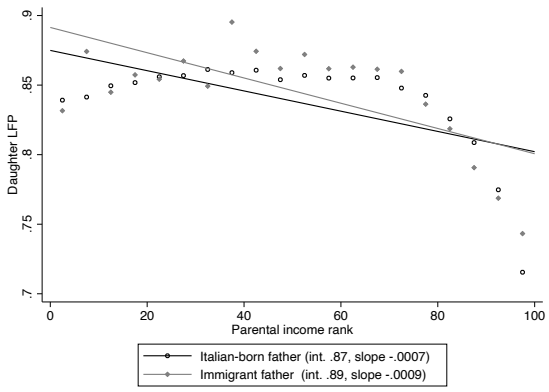
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2017, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.8.12: Linked data: Intergenerational mobility, employment, Italy

(a) Italy, sons



(b) Italy, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2017, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts.

C.8.3.4 Educational mobility

College enrolment
College enrolment is not available in the Italian data.

Primary school grades
School grades are not available in the Italian data.

C.8.4 Robustness

C.8.4.1 Emigration

Emigration information is not available in the Italian data.

C.8.4.2 Additional years of parental income data

No additional years of parental income are available in the Italian data.

C.8.4.3 More recent birth cohorts

No other birth cohorts are available in the Italian data.

C.9 Country-specific details & results: The Netherlands

C.9.1 Data details and deviations

We rely on administrative data provided by Statistics Netherlands to construct the relevant datasets on parents and children. Each dataset contains the personal identification number assigned to individuals living in the Netherlands, which allows merging information from different datasets for a given individual, and allows biological parents and children to be linked.

Specifically, this project relies on the following datasets:

GBAPERSOONTAB. This dataset provides basic individual demographic information (e.g. gender, birth date, and origin) on the universe of all registered inhabitants in The Netherlands, provided they have resided in The Netherlands since 1995. Residents who have left The Netherlands prior to the start of the registry in 1995 cannot be observed. This data source is used to select a sample of children born in The Netherlands, and determine the country of birth (immigration status) of their parents. Contrary to the Danish example, day of birth is not available, so birthdate is defined by month and year of birth only.

KINDOUDERTAB. This dataset provides identification numbers of children and their parents, which allows to link different generations of family members.

INPATAB. This dataset provides information on the different income sources of all individuals, which is used to define income ranks of children in 2014 and 2015.

IPO. This survey data on approximately 250,000 Dutch inhabitants provides information on parental income sources for the period 1989-2000. Due to lack of wealth information for 1994, we proxy this by using information on house value, and received dividends and interest.

GBAADRESOBJECTBUS. This dataset provides information on addresses of all Dutch inhabitants, which is used to define the parental region of residence on October 1^st, 1994.

BAANKENMERKENBUS. This dataset provides information on job characteristics of all paid employment contracts, which is used to define the parental employment industry. Contrary to the Danish example, due to lack of information on industry in 1994, we rely on industry information in 1999.

CITOTAB. This dataset provides information on standardized scores of a high-stakes test that is taken in the final year of primary school, and is available from 2006 onwards. This implies that test scores are available for cohorts born 1994-1996, instead of the 1986-1988 cohorts that were considered in the Danish case.

HOOGSTEOPLTAB. This dataset provides information on the highest degree of completed schooling. Due to lack of reliable information for 2011-2012, we identify whether children have been enrolled in college at ages 25/26/27, i.e. reaching a college degree in 2013 (first cohort) and

2019 (second cohort).

Data access. Researchers interested in working with the data have to apply for data access. Guidance on how to apply for data access is provided here: https://www.cbs.nl/en-gb/our-services/customised-services-microdata/microdata-conducting-your-own-research/applying-for-access-to-microdata. Once data access is granted, the data will be made available to researchers within a secure Remote Access environment provided by Statistics Netherlands.

C.9.1.1 Cross-sectional data

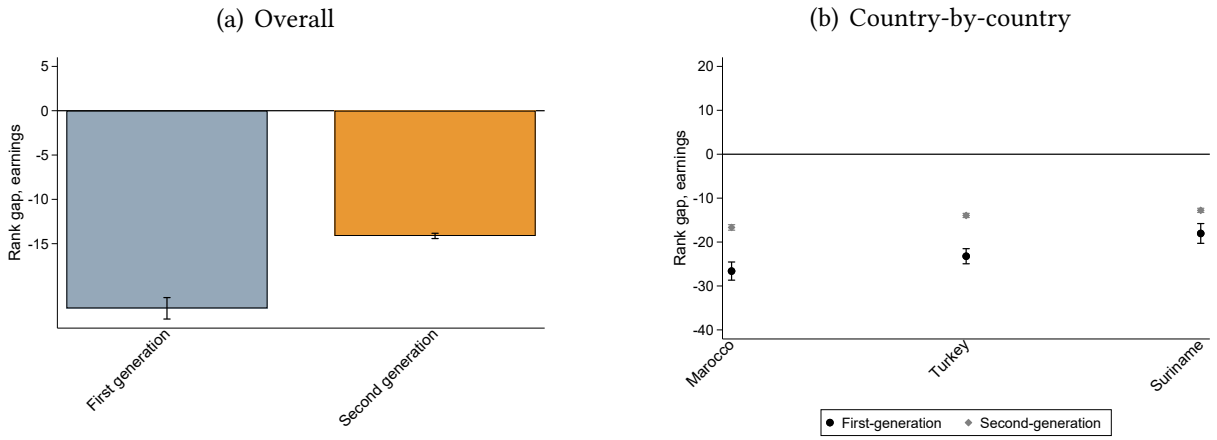
Similar to the Danish example, we identify fathers aged 30 to 50 with at least one child, residing in The Netherlands in the 1980s, and who were born in The Netherlands or in one of the top-sending countries (i.e. Suriname, Morocco, Turkey). We identify sons aged 30 to 50 in 2011 and 2015, residing in The Netherlands in the 2010s, who were born in The Netherlands from fathers born either in The Netherlands or in one of the top-sending countries. Immigration status is based on country of birth of the father. We measure parents' income in 1981 and 1985 using IPO, and their sons' income in 2011 and 2015 using INPATAB. Although we use the same income definition as in the Danish case, transfers in The Netherlands are defined at the household level, and are only paid to one member of the household. Robustness results show that the results are not sensitive to including or excluding transfer income.

C.9.1.2 Linked data

Following the Danish example, we use the 2014 and 2015 population registries (GBAPERSOONTAB) to identify children born in the Netherlands between 1978-1983. Total income for children is based on the 2014-2015 tax registries (INPATAB), whereas income for parents is based on 1994-2000 income surveys (IPO). All income measures are deflated to 2013-values. Again, we use both an income measure including household transfers (following the Danish example) and an alternative which excludes transfers.

C.9.2 Cross-sectional results

Figure C.9.13: Cross-sectional results using total earnings: The Netherlands, 1981-2011 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1981 and 2011 respectively. We use measures of total earnings for both generations. Panel a) includes a non-Dutch dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.9.14: Cross-sectional data: Summary statistics, Netherlands

Fathers: 1981 cohort

	Immigrants	Dutch-born	Diff.	Std. Error
Age	38.403	38.856	0.453***	0.172
Rank gap, total income_incl	27.416	50.627	23.211***	0.835
rank_all_inc_incl	31.549	50.512	18.963***	0.837
Rank gap, earnings	28.310	50.602	22.292***	0.835
ln(total income_incl)	10.456	10.759	0.303***	0.015
ln_all_inc_incl	10.453	10.733	0.280***	0.016
ln(earnings)	10.389	10.716	0.327***	0.020
Total income_incl > 0	0.931	0.969	0.038***	0.005
ext_margin_all_inc_incl	0.945	0.974	0.029***	0.005
Earnings > 0	0.807	0.922	0.115***	0.008
Share of population	0.027	0.973		
N	1211	43587		

Sons: 2011 cohort

	Immigrant father	Dutch-born father	Diff.	Std. Error
Age	34.702	40.893	6.192***	0.030
Rank gap, total income_incl	36.583	50.250	13.667***	0.148
rank_all_inc_incl	35.394	50.272	14.878***	0.148
Rank gap, earnings	36.134	50.258	14.124***	0.148
ln(total income_incl)	10.515	10.811	0.296***	0.005
ln_all_inc_incl	10.573	10.972	0.399***	0.006
ln(earnings)	10.550	10.817	0.267***	0.006
Total income_incl > 0	0.874	0.929	0.055***	0.001
ext_margin_all_inc_incl	0.888	0.935	0.047***	0.001
Earnings > 0	0.742	0.879	0.137***	0.002
Share of population	0.018	0.982		
N	38547	2068374		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1981 and 2011 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.9.3 Main results

C.9.3.1 Summary statistics

Table C.9.15: Linked data: Summary statistics, The Netherlands

Sons

	Immigrant father	Dutch-born father	Diff.	Std. Error
Child age	32.333	32.619	0.286***	0.052
Child income rank	45.945	60.490	14.545***	0.865
Child income rank_incl	45.546	61.343	15.797***	0.868
Child labour force part.	0.730	0.882	0.153***	0.010
Mother's age at child birth	-513.792	-513.717	0.075	0.060
Father's age at child birth	-512.641	-513.053	-0.411***	0.065
Parental income rank	33.200	53.045	19.845***	0.870
Parental income rank_incl	34.783	52.731	17.948***	0.873
Parental house value rank, 1994	30.911	53.135	22.224***	0.941
Parental mortgage interest paid rank, 1994	33.622	52.716	19.095***	0.948
Parental interest received rank, 1994	27.971	53.440	25.468***	0.951
Parental dividend received rank, 1994	43.764	51.061	7.298***	0.655
Child share of population	0.135	0.865		
N	1227	7868		

Daughters

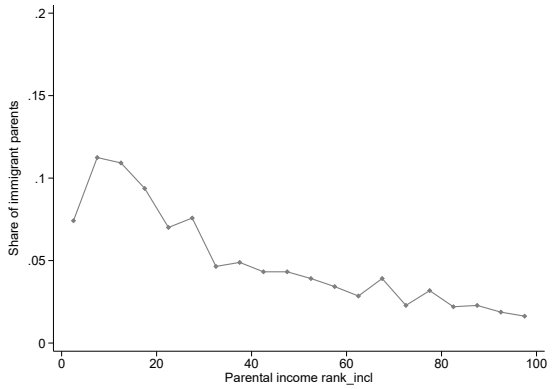
	Immigrant father	Dutch-born father	Diff.	Std. Error
Child age	32.338	32.635	0.297***	0.053
Child income rank	39.550	41.424	1.874**	0.820
Child income rank_incl	39.253	40.651	1.398*	0.799
Child labour force part.	0.689	0.840	0.151***	0.011
Mother's age at child birth	-513.736	-513.749	-0.013	0.062
Father's age at child birth	-512.581	-513.064	-0.483***	0.067
Parental income rank	33.539	52.160	18.621***	0.876
Parental income rank_incl	35.406	51.936	16.530***	0.881
Parental house value rank, 1994	29.863	52.317	22.454***	0.947
Parental mortgage interest paid rank, 1994	32.669	51.968	19.299***	0.949
Parental interest received rank, 1994	27.941	52.693	24.752***	0.951
Parental dividend received rank, 1994	43.758	50.672	6.913***	0.656
Child share of population	0.136	0.864		
N	1198	7584		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child earnings measured in 2014-2015, and parental earnings 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

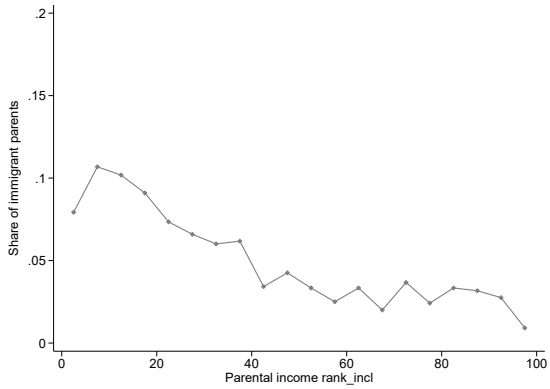
C.9.3.2 Parental income distribution

Figure C.9.14: Linked data: The Netherlands, share of total number of children with immigrant parents

(a) Sons



(b) Daughters

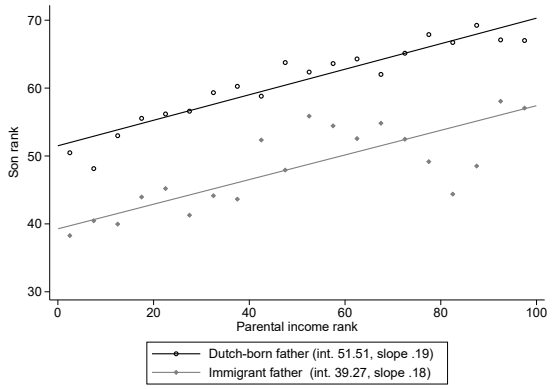


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

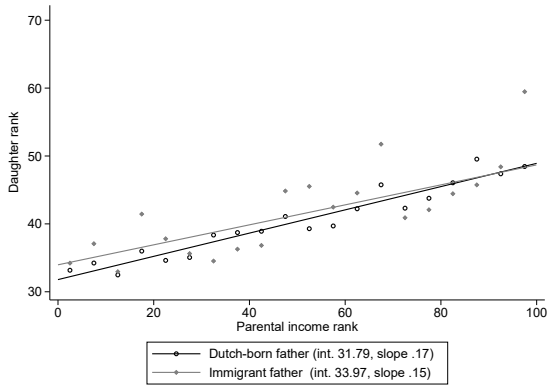
C.9.3.3 Rank-rank relationship

Figure C.9.15: Linked data: Intergenerational mobility, The Netherlands

(a) The Netherlands, sons



(b) The Netherlands, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.9.16: Linked data: Intergenerational mobility estimates, The Netherlands

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-10.39***	2.480
	(1.478)	(1.539)
Parents' rank	0.205***	0.206***
	(0.0114)	(0.0115)
Immigrant father # rank	-0.0226	-0.0255
	(0.0336)	(0.0340)
Constant	41.31***	39.50***
	(0.654)	(0.658)
Observations	9,014	8,721
R-squared	0.070	0.040

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.9.3.4 Oaxaca-Blinder decomposition

Table C.9.17: Oaxaca-Blinder decompositions, child income rank, The Netherlands

	Sons: pooled	Sons: non-immi. ref.	Sons: immi. ref.	Daughters: pooled	Daughters: non-immi. ref.	Daughters: immi. ref.
Immigrant father	45.58***	45.58***	45.58***	39.18***	39.18***	39.18***
	(0.870)	(0.870)	(0.870)	(0.763)	(0.763)	(0.763)
No immigrant father	61.42***	61.42***	61.42***	40.69***	40.69***	40.69***
	(0.316)	(0.316)	(0.316)	(0.295)	(0.295)	(0.295)
Difference	-15.84***	-15.84***	-15.84***	-1.503*	-1.503*	-1.503*
	(0.925)	(0.926)	(0.926)	(0.818)	(0.818)	(0.818)
Total explained	-3.360***	-3.374***	-3.256***	-2.781***	-2.831***	-2.434***
	(0.246)	(0.254)	(0.617)	(0.214)	(0.223)	(0.489)
Total unexplained	-12.48***	-12.46***	-12.58***	1.279	1.328	0.931
	(0.934)	(0.936)	(1.103)	(0.821)	(0.819)	(0.961)
Parents' rank_incl	-0.241	-0.227	-0.345	-0.900	-0.851	-1.248
	(1.298)	(1.225)	(1.857)	(1.137)	(1.075)	(1.577)
- Constant	-12.24***	-12.24***	-12.24***	2.179	2.179	2.179
	(1.577)	(1.578)	(1.578)	(1.350)	(1.350)	(1.350)
Observations	9,014	9,014	9,014	8,721	8,721	8,721

Notes: This table reports Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in inter-generational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.9.4 Mechanisms

C.9.4.1 Various sets of controls

Table C.9.18: Linked data: Intergenerational mobility estimates with various sets of controls, The Netherlands

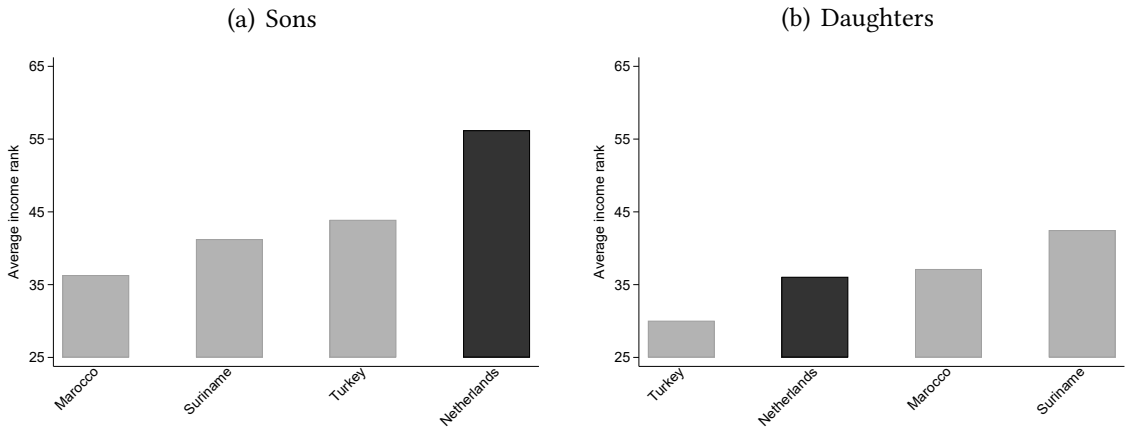
VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Sons	(8) Daughters	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters	(13) Daughters	(14) Daughters
Immigrant father = 1	-13.01***	-13.86***	-11.65***	-9.182***	-11.64***	-9.267***	-7.320***	1.198	0.599	0.508	2.615	1.086	1.712	1.448
	(1.522)	(1.532)	(1.598)	(1.887)	(1.554)	(1.942)	(2.052)	(1.298)	(1.304)	(1.384)	(1.604)	(1.326)	(1.653)	(1.777)
Parents' rank_incl	0.186***	0.164***	0.151***	0.102***	0.168***	0.0905***	0.0872***	0.170***	0.182***	0.179***	0.122***	0.137***	0.0867***	0.0914***
	(0.0113)	(0.0123)	(0.0128)	(0.0144)	(0.0122)	(0.0153)	(0.0159)	(0.0103)	(0.0113)	(0.0118)	(0.0133)	(0.0114)	(0.0143)	(0.0149)
Immigrant father # rank	0.0162	0.0173	0.00808	0.00651	0.0174	0.0112	-0.00411	0.00557	0.00980	0.0119	0.0118	0.00891	0.0180	0.0172
	(0.0350)	(0.0349)	(0.0358)	(0.0391)	(0.0357)	(0.0401)	(0.0414)	(0.0302)	(0.0302)	(0.0316)	(0.0333)	(0.0308)	(0.0344)	(0.0364)
Constant	51.62***	46.35***	54.11***	50.24***	60.68***	49.66***	58.22***	31.84***	31.69***	16.61*	28.63***	34.71***	33.40***	11.04
	(0.671)	(1.815)	(11.11)	(1.303)	(3.053)	(3.683)	(11.63)	(0.576)	(1.668)	(9.347)	(1.140)	(3.746)	(4.344)	(9.449)
Observations	8,986	8,986	8,986	7,917	8,986	7,917	7,917	8,689	8,689	8,689	7,674	8,689	7,674	7,674
R-squared	0.069	0.078	0.141	0.087	0.090	0.113	0.180	0.035	0.039	0.115	0.057	0.066	0.088	0.167
Parental region	0	1	0	0	0	1	0	0	1	0	0	0	1	0
Parental municipality	0	0	1	0	0	0	1	0	0	1	0	0	0	1
Parental wealth	0	0	0	1	0	1	1	0	0	0	1	0	1	1
Parental industry	0	0	0	0	1	1	1	0	0	0	0	1	1	1
Parental industry, 3-digit	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1990 and included as fixed effects. Parental region covers province and municipality. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

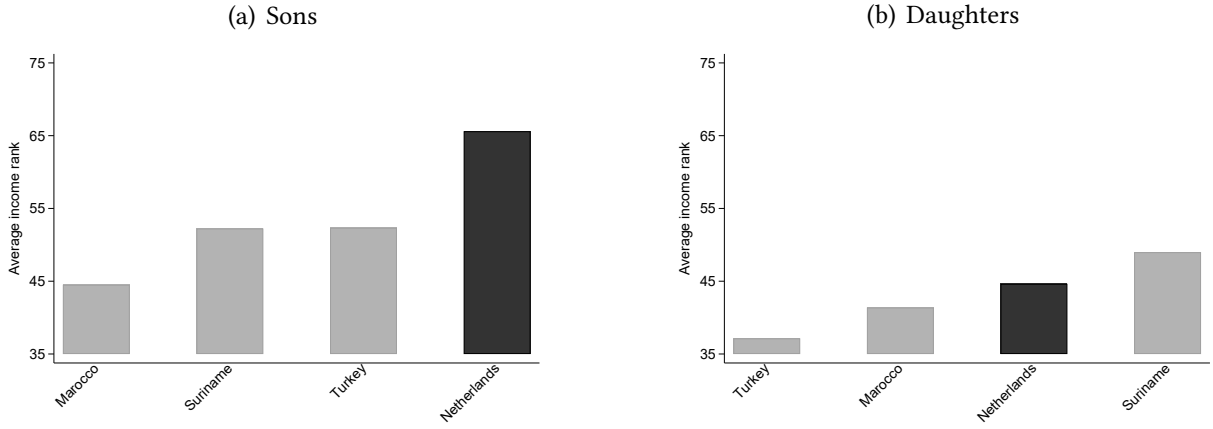
C.9.4.2 Heterogeneity across sending countries

Figure C.9.16: Average income at 25th percentile: Netherlands



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.9.17: Average income at 75th percentile: The Netherlands



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.9.4.3 Employment

Table C.9.19: Linked data: Intergenerational mobility estimates, employment, The Netherlands

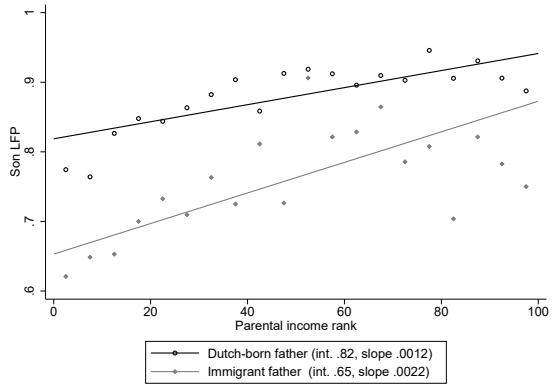
VARIABLES	(1) Sons 1978-1983	(2) Daughters 1978-1983
Immigrant father = 1	-12.24***	2.179
	(1.577)	(1.350)
Parents' rank_incl	0.188***	0.171***
	(0.0112)	(0.0103)
Immigrant father # rank_incl	-0.00654	-0.0240
	(0.0352)	(0.0304)
Constant	51.51***	31.79***
	(0.670)	(0.575)
Observations	9,014	8,721
R-squared	0.069	0.035

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

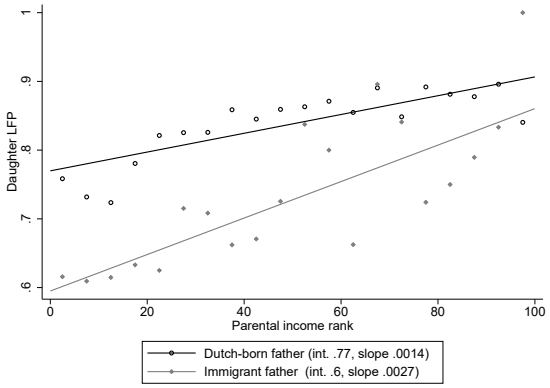
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** *p<0.01,* ** *p<0.05,* * *p<0.1.*

Figure C.9.18: Linked data: Intergenerational mobility, employment, Netherlands

(a) The Netherlands, sons



(b) The Netherlands, daughters



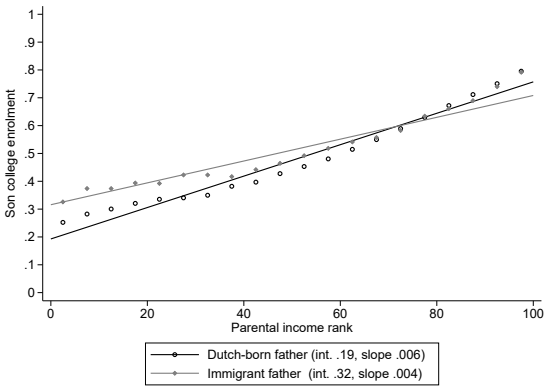
Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.9.4.4 Educational mobility

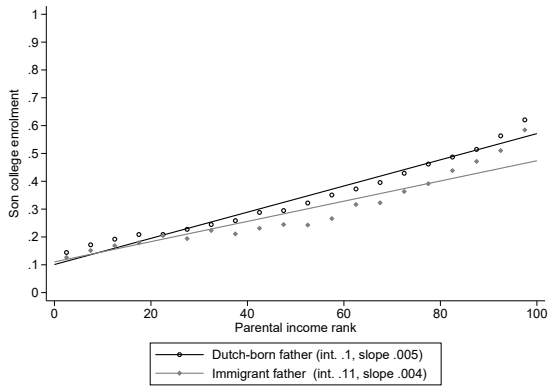
College enrolment

Figure C.9.19: Linked data: College graduation, The Netherlands, comparison across cohorts

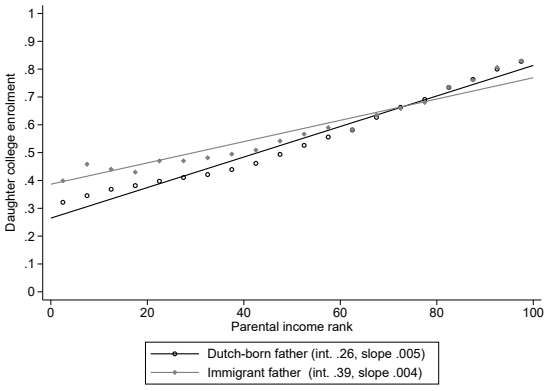
(a) The Netherlands, sons, born 1994-1996



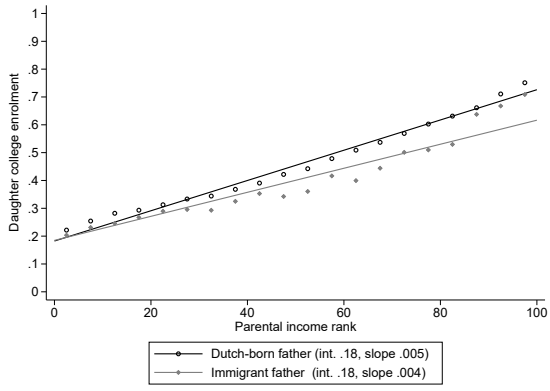
(b) The Netherlands, sons, born 2000-2002



(c) The Netherlands, daughters, born 1994-1996



(d) The Netherlands, daughters, born 2000-2002

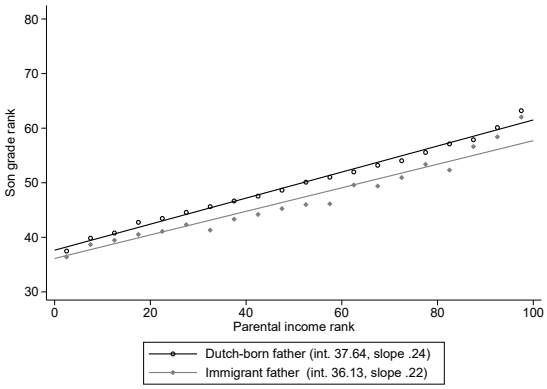


Notes: This figure plots estimates of Specification 1, regressing an indicator of college graduation on the income rank of parents. Children born in 1994-1996 and 2000-2002 respectively. Immigration status is determined by father's country of birth. Parental income measured in 2003-2006 and 2006-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

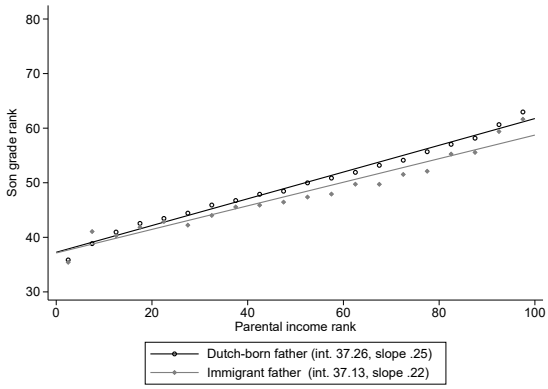
Primary school grades

Figure C.9.20: Linked data: Primary school grades, The Netherlands, comparison across cohorts

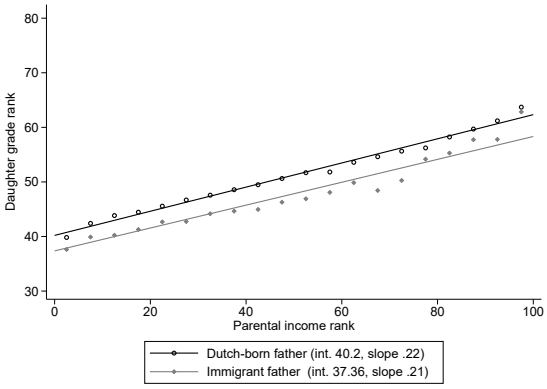
(a) The Netherlands, sons, born 1994-1996



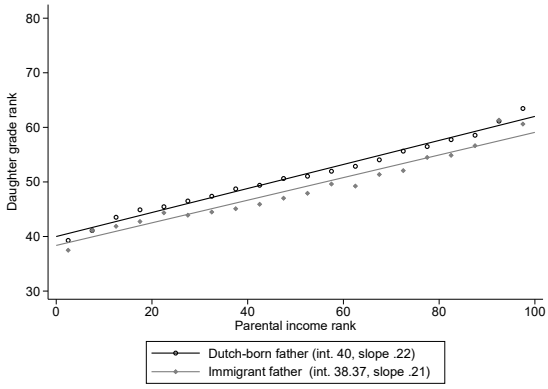
(b) The Netherlands, sons, born 2000-2002



(c) The Netherlands, daughters, born 1994-1996



(d) The Netherlands, daughters, born 2000-2002

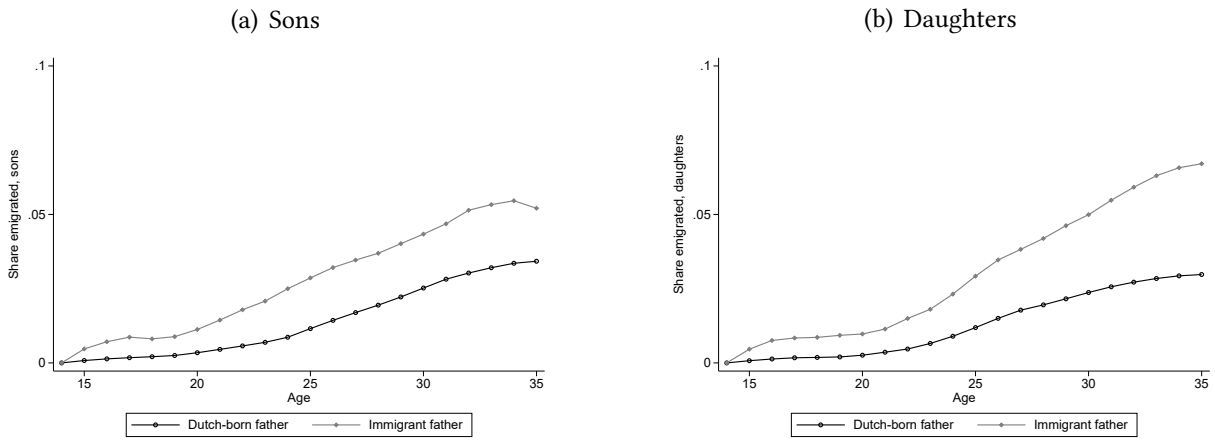


Notes: This figure plots estimates of Specification 1, regressing test score rank on the income rank of parents. Children born in 1994-1996 and 2000-2002 respectively. Immigration status is determined by father's country of birth. Parental income measured in 2003-2006 and 2006-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

C.9.5 Robustness

C.9.5.1 Emigration

Figure C.9.21: The Netherlands, cumulative share of emigrated children

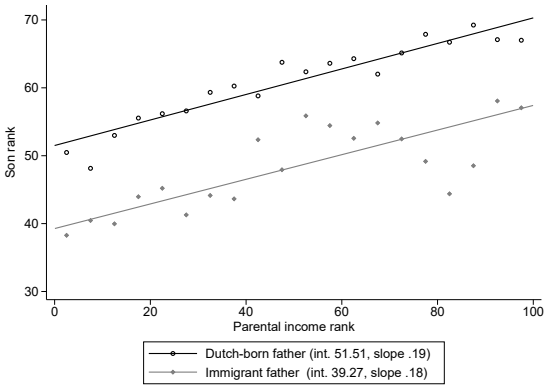


Notes: This figure shows the share of children who have emigrated (i.e. no longer living in the Netherlands) across age groups. We consider all children who were part of the Dutch population since 1995 at age 14 and calculate the share of emigrated children as they age. If children move back to The Netherlands after a period abroad, they are no longer counted as emigrants. Children born in 1978-1983. Immigration status is determined by father's country of birth.

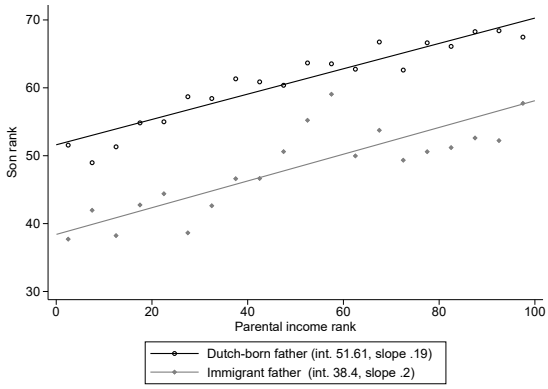
C.9.5.2 Additional years of parental income data

Figure C.9.22: Intergenerational mobility: The Netherlands by number of years of parental income data

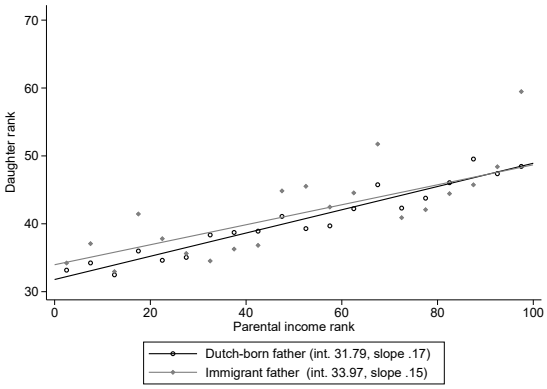
(a) Sons, parental income 1994-2000



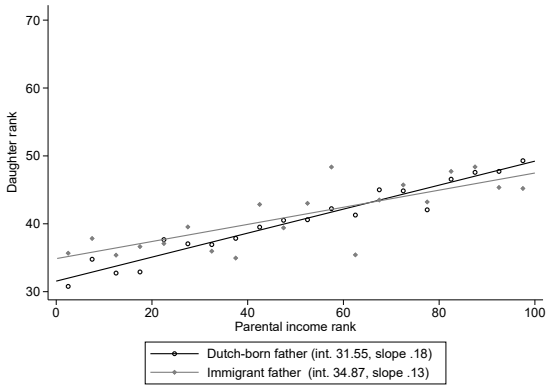
(b) Sons, parental income 1989-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1989-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1989-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.9.20: Intergenerational mobility estimates: The Netherlands, parental income 1989-2000

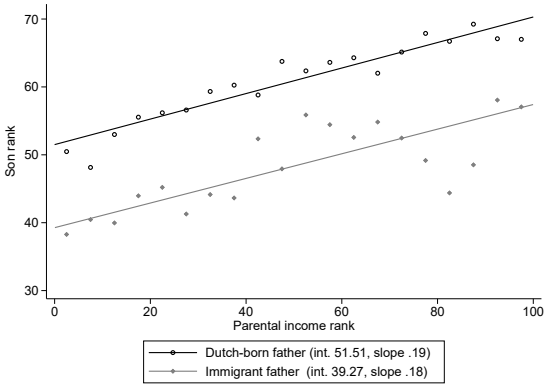
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-13.20***	3.315***
	(1.476)	(1.256)
Parents' rank_incl	0.187***	0.177***
	(0.0107)	(0.00978)
Immigrant father # rank_incl	0.0103	-0.0506*
	(0.0326)	(0.0283)
Constant	51.61***	31.55***
	(0.636)	(0.547)
Observations	9,968	9,677
R-squared	0.072	0.035

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1989-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

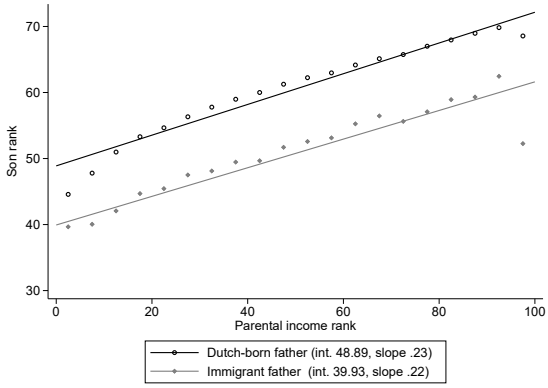
C.9.5.3 More recent birth cohorts, income rank

Figure C.9.23: Linked data: Intergenerational mobility, The Netherlands, comparison across cohorts

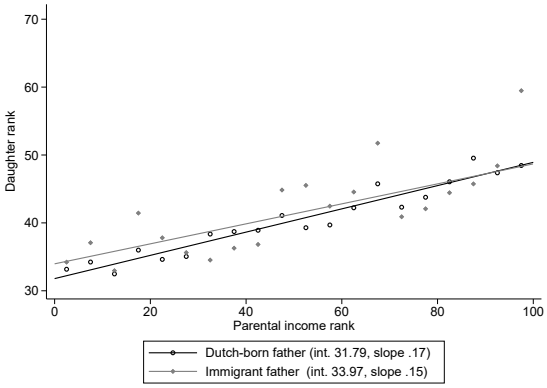
(a) The Netherlands, sons, born 1978-1983



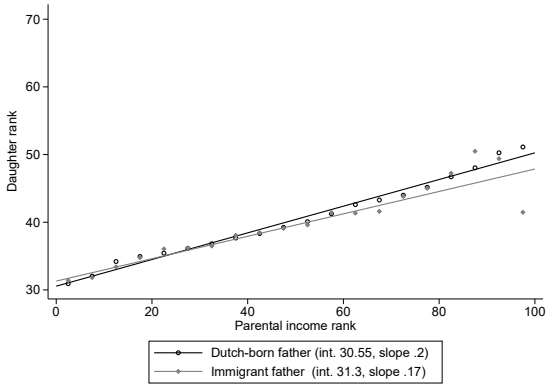
(b) The Netherlands, sons, born 1982-1987



(c) The Netherlands, daughters, born 1978-1983



(d) The Netherlands, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.9.21: Linked data: Intergenerational mobility estimates, The Netherlands, comparing cohorts

	(1)	(2)
	Sons	Daughters
VARIABLES	1982-1987	1982-1987
Immigrant father = 1	-7.179***	0.289
	(0.195)	(0.204)
Parents' rank	0.244***	0.217***
	(0.00149)	(0.00152)
Immigrant father # rank	-0.0348***	-0.0324***
	(0.00468)	(0.00475)
Constant	38.93***	39.33***
	(0.0875)	(0.0882)
Observations	518,108	495,744
R-squared	0.077	0.047

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.10 Country-specific details & results: Norway

C.10.1 Data details and deviations

As in the Danish case, we use several administrative registers covering the population of Norwegian residents from the 1980s onward to construct the relevant datasets on children and parents.

Data access. These administrative registers were provided by Statistics Norway. Researchers can gain access to the same registries by submitting a written application to Statistics Norway. The application should include a detailed research proposal, a comprehensive list of datasets and variables, and the selection criteria to be used. Guidance on how to access the data is provided by Statistics Norway here: https://www.ssb.no/data-til-forskning/utlan-av-data-til-forskere.

C.10.1.1 Cross-sectional data

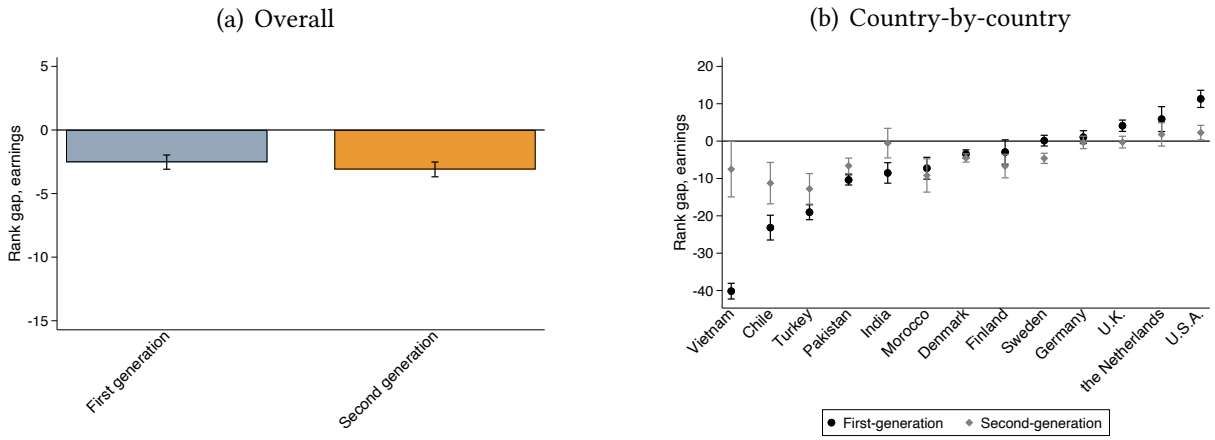
Similar to the Danish case, we use data from 1980 population registers of Norwegian residents (BUSTAD and FASTEOPPL registers) to identify men, their age, parental status, and immigration status (defined by their country of birth). Measures of paternal total income and earnings are derived from the 1980 tax registers (SKATT and PINNT). We use data from 2010 population registers (REGSTATUS and FASTEOPPL registers) to identify sons, their age, and their immigration status (defined by their fathers' country of birth). The measures of sons' total income and earnings come from the 2010 tax register (INNTEKT).

C.10.1.2 Linked data

As in the Danish case, we use data from 2014 and 2015 population registers (REGSTATUS and FASTEOPPL) to identify Norwegian residents. These registers also provide individuals' year of birth, parental IDs, children's IDs, and immigration status (defined by country of birth). Total income and earnings for children and parents are obtained from the 1994 and 2000 tax registers (INNTEKT). To define parental industry, we use the "International Standard Industrial Classification" (version 1994) rather than the Statistical Classification of Economic Activities in the European Community (NACE) used in the Danish. With this classification, we have 35 broad industrial categories (first 2 digits), and 85 more detailed categories (first 3 digits).

C.10.2 Cross-sectional results

Figure C.10.24: Cross-sectional results using total earnings: Norway, 1980-2010 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for sons and fathers in 1980 and 2010 respectively. We use measures of earnings for both generations. Panel a) includes a non-Norwegian dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.10.22: Cross-sectional data: Summary statistics, Norway

Fathers: 1980 cohort

	Immigrants	Norwegian-born	Diff.	Std. Error
Age	37.709	38.794	1.085***	0.055
Rank gap, total income	48.504	50.044	1.541***	0.261
Rank gap, earnings	47.546	50.073	2.527***	0.261
ln(total income)	11.621	11.591	-0.031***	0.005
ln(earnings)	11.438	11.439	0.001	0.005
Total income > 0	0.910	0.945	0.035***	0.002
Earnings > 0	0.962	0.982	0.020***	0.001
Share of population	0.029	0.971		
N	12631.000	425707.000		

Sons: 2010 cohort

	Immigrant father	Norwegian-born father	Diff.	Std. Error
Age	38.345	40.369	2.025***	0.058
Rank gap, total income	46.972	50.054	3.082***	0.285
Rank gap, earnings	46.952	50.054	3.102***	0.285
ln(total income)	12.877	13.023	0.147***	0.008
ln(earnings)	12.859	12.965	0.106***	0.009
Total income > 0	0.992	0.996	0.004***	0.001
Earnings > 0	0.910	0.931	0.021***	0.003
Share of population	0.017	0.983		
N	10416.000	586865.000		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1980 and 2010 respectively. Immigration status is determined by father 's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.10.3 Main results

C.10.3.1 Summary statistics

Table C.10.23: Linked data: Summary statistics, Norway

Sons

	Immigrant father	Norwegian-born father	Diff.	Std. Error
Child age	33.360	33.516	0.157***	0.022
Child income rank	52.538	57.535	4.997***	0.376
Child labour force part.	0.896	0.932	0.036***	0.003
Mother's age at child birth	27.304	26.799	-0.505***	0.063
Father's age at child birth	31.176	29.508	-1.668***	0.072
Parental income rank	38.630	50.354	11.724***	0.364
Parental wealth rank, 1994	47.442	50.109	2.667***	0.366
Child share of population	0.045	0.955		
N	6541.000	140319.000		

Daughters

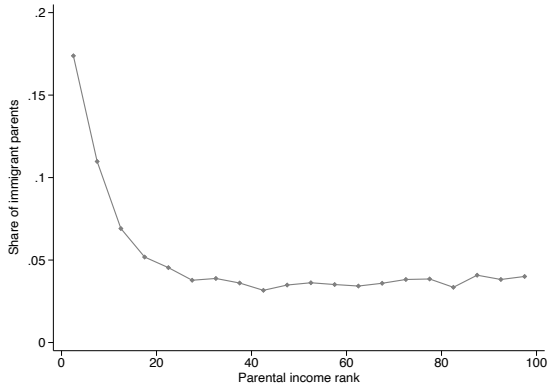
	Immigrant father	Norwegian-born father	Diff.	Std. Error
Child age	33.385	33.519	0.134***	0.022
Child income rank	41.417	42.365	0.948***	0.340
Child labour force part.	0.880	0.925	0.046***	0.003
Mother's age at child birth	27.439	26.777	-0.662***	0.066
Father's age at child birth	31.139	29.512	-1.627***	0.075
Parental income rank	38.311	50.710	12.399***	0.379
Parental wealth rank, 1994	47.283	50.132	2.849***	0.379
Child share of population	0.043	0.957		
N	6018.000	133888.000		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father 's country of birth. Child income measured in 2014-2015, and parental income and wealth 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

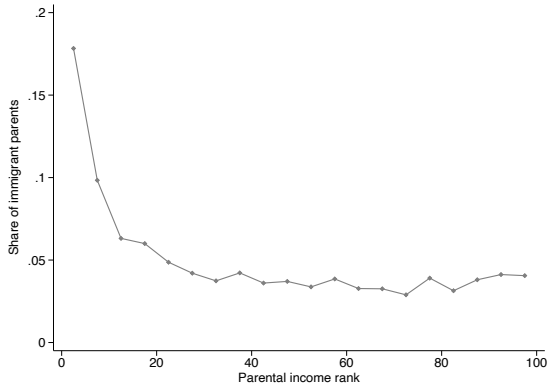
C.10.3.2 Parental income distribution

Figure C.10.25: Linked data: Norway, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

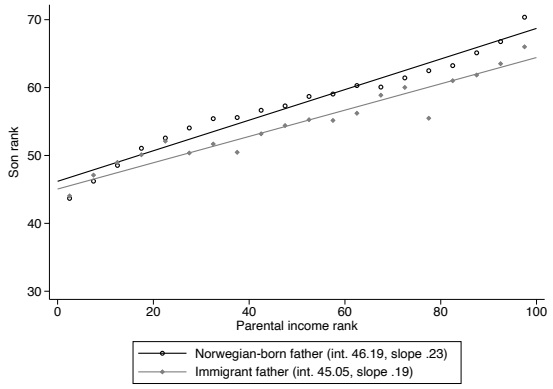


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

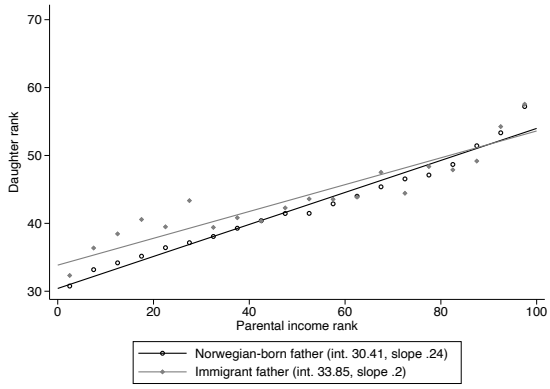
C.10.3.3 Rank-rank relationship

Figure C.10.26: Linked data: Intergenerational mobility, Norway

(a) Norway, sons



(b) Norway, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.10.24: Linked data: Intergenerational mobility estimates, Norway

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-1.139*	3.434***
	(0.645)	(0.561)
Parents' rank	0.225***	0.236***
	(0.00274)	(0.00241)
Immigrant father # rank	-0.0315**	-0.0381***
	(0.0128)	(0.0117)
Constant	46.19***	30.41***
	(0.157)	(0.132)
Observations	146,860	139,906
R-squared	0.048	0.068

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.10.3.4 Oaxaca-Blinder decomposition

Table C.10.25: Oaxaca-Blinder decompositions, child income rank, Norway

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: Immigrant father	52.54***	52.54***	52.54***	41.42***	41.42***	41.42***
	(0.400)	(0.400)	(0.400)	(0.361)	(0.361)	(0.361)
Mean child income rank: No immigrant father	57.53***	57.53***	57.53***	42.37***	42.37***	42.37***
	(0.0790)	(0.0790)	(0.0790)	(0.0701)	(0.0701)	(0.0701)
Difference in means	−4.997***	−4.997***	−4.997***	−0.948***	−0.948***	−0.948***
	(0.408)	(0.408)	(0.408)	(0.367)	(0.367)	(0.367)
Total explained difference	−2.620***	−2.641***	−2.271***	−2.898***	−2.923***	−2.450***
due to differences in parental income distributions	(0.0951)	(0.0959)	(0.166)	(0.101)	(0.102)	(0.164)
Total unexplained difference	−2.376***	−2.356***	−2.725***	1.950***	1.975***	1.502***
due to differences in mobility parameters	(0.402)	(0.402)	(0.425)	(0.359)	(0.359)	(0.393)
- Parental income rank (*relative mobility*)	−1.237**	−1.217**	−1.586**	−1.484***	−1.460***	−1.932***
	(0.502)	(0.494)	(0.643)	(0.456)	(0.448)	(0.593)
- Intercept (*absolute mobility*)	−1.139*	−1.139*	−1.139*	3.434***	3.434***	3.434***
	(0.645)	(0.645)	(0.645)	(0.561)	(0.561)	(0.561)
Observations	146,860	146,860	146,860	139,906	139,906	139,906

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.10.4 Mechanisms

C.10.4.1 Various sets of controls

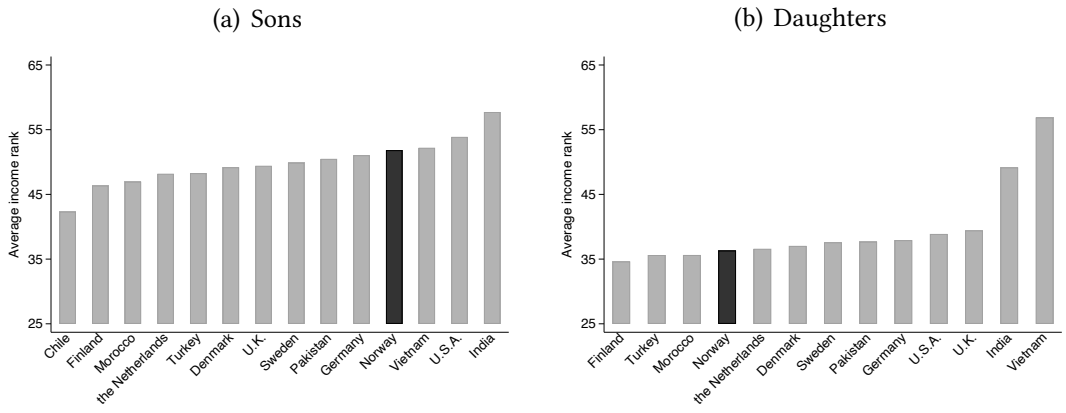
Table C.10.26: Linked data: Intergenerational mobility estimates with various sets of controls, Norway

VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Sons	(8) Sons	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters	(13) Daughters	(14) Daughters	(15) Daughters	(16) Daughters
Immigrant father = 1	-1.139*	-0.426	0.831	-0.550	-0.141	0.0279	0.852	1.753***	3.434***	2.795***	2.489***	3.879***	3.647***	3.569***	3.522***	3.023***
	(0.645)	(0.654)	(0.661)	(0.645)	(0.647)	(0.648)	(0.655)	(0.661)	(0.561)	(0.567)	(0.574)	(0.562)	(0.563)	(0.564)	(0.569)	(0.575)
Parents' rank	0.225***	0.227***	0.231***	0.236***	0.209***	0.208***	0.217***	0.216***	0.236***	0.240***	0.237***	0.241***	0.218***	0.213***	0.222***	0.220***
	(0.00274)	(0.00283)	(0.00288)	(0.00280)	(0.00306)	(0.00311)	(0.00320)	(0.00322)	(0.00241)	(0.00250)	(0.00255)	(0.00247)	(0.00273)	(0.00278)	(0.00285)	(0.00288)
Immigrant father # rank	-0.0315**	-0.0351***	-0.0447***	-0.0322**	-0.0392***	-0.0396***	-0.0405***	-0.0471***	-0.0381***	-0.0305***	-0.0285**	-0.0397***	-0.0406***	-0.0410***	-0.0366***	-0.0325***
	(0.0128)	(0.0128)	(0.0129)	(0.0127)	(0.0128)	(0.0128)	(0.0128)	(0.0128)	(0.0117)	(0.0117)	(0.0117)	(0.0117)	(0.0117)	(0.0117)	(0.0117)	(0.0117)
Constant	46.19***	43.66***	46.67***	41.87***	49.20***	49.25***	43.86***	46.63***	30.41***	31.15***	27.76***	28.24***	30.83***	31.06***	30.37***	26.81***
	(0.157)	(0.263)	(1.012)	(0.408)	(1.026)	(1.027)	(1.098)	(1.473)	(0.132)	(0.229)	(0.920)	(0.361)	(0.921)	(0.921)	(0.990)	(1.339)
Observations	146,860	146,860	146,860	146,860	146,860	146,860	146,860	146,860	139,906	139,906	139,906	139,906	139,906	139,906	139,906	139,906
R-squared	0.048	0.056	0.069	0.059	0.052	0.054	0.071	0.082	0.068	0.070	0.076	0.075	0.075	0.077	0.083	0.089
Parental region	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0
Parental municipality	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
Parental wealth	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1
Parental industry, 35 grp.	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1
Parental industry, 3-digit	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1994 and included as fixed effects. We have 8 regions and 434 municipalities. Parental industries include categories for unknown industry as well as no industry (if not working). Parental wealth FEs are included as ventiles. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

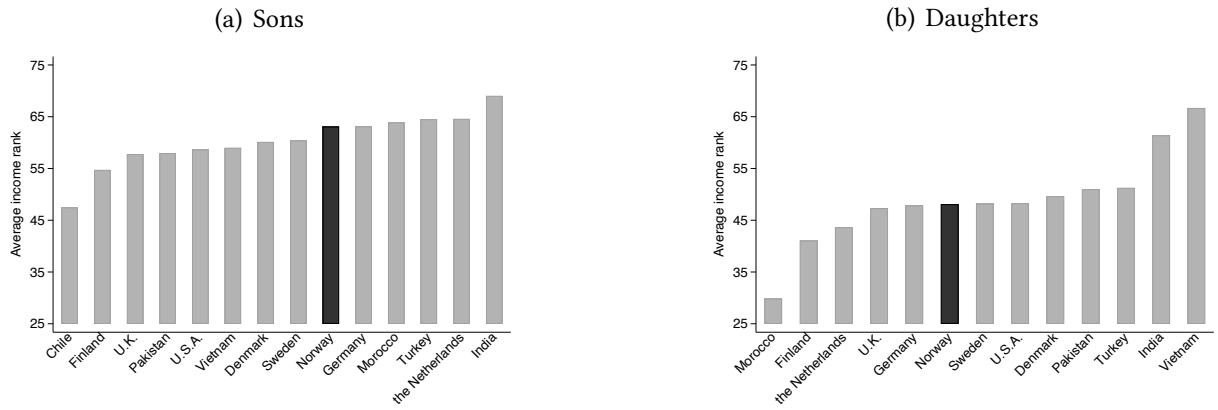
C.10.4.2 Heterogeneity across sending countries

Figure C.10.27: Average income at 25th percentile: Norway



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.10.28: Average income at 75th percentile: Norway



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.10.4.3 Employment

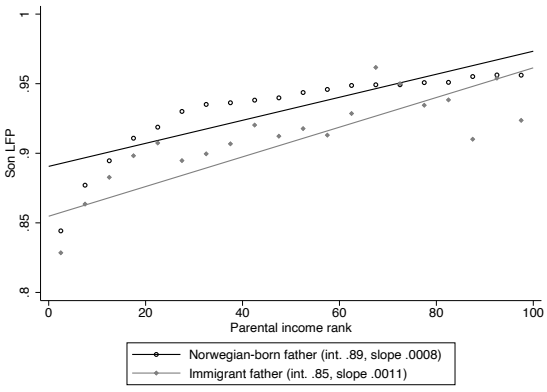
Table C.10.27: Linked data: Intergenerational mobility estimates, employment, Norway

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0358***	-0.0459***
	(0.00647)	(0.00721)
Parents' rank	0.000827***	0.00104***
	(2.38e-05)	(2.54e-05)
Immigrant father # rank	0.000239**	0.000340***
	(0.000112)	(0.000124)
Constant	0.891***	0.873***
	(0.00152)	(0.00165)
Observations	146,860	139,906
R-squared	0.011	0.016

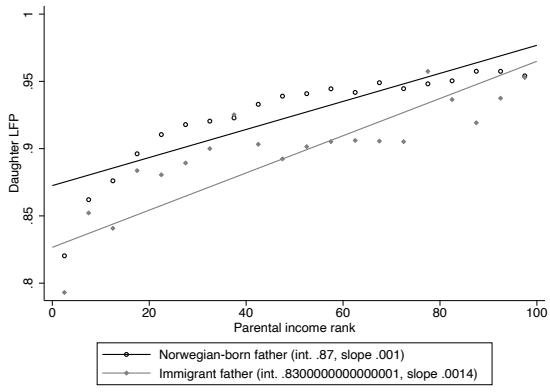
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.10.29: Linked data: Intergenerational mobility, employment, Norway

(a) Norway, sons



(b) Norway, daughters



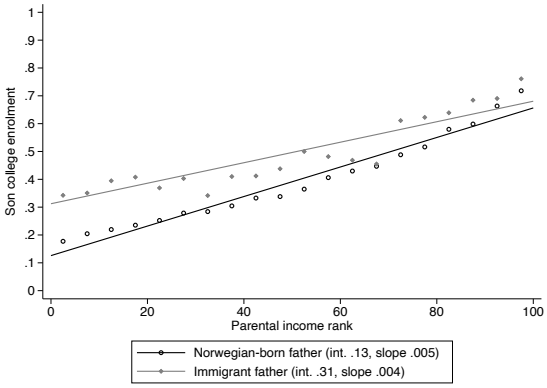
Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.10.4.4 Educational mobility

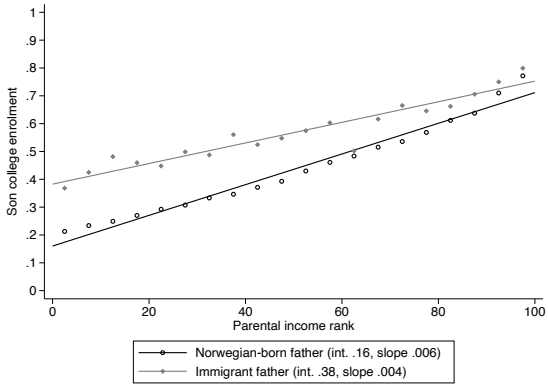
College enrollment

Figure C.10.30: Linked data: College enrolment by age 25, Norway, comparison across cohorts

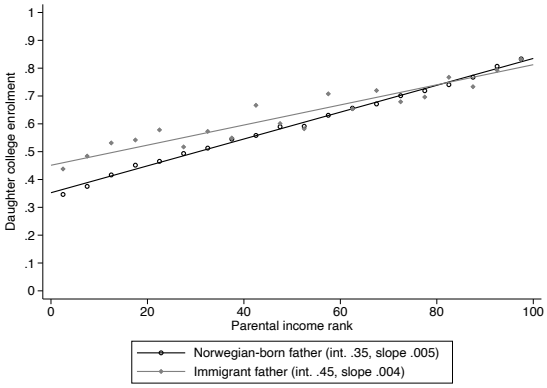
(a) Norway, sons, born 1986-1988



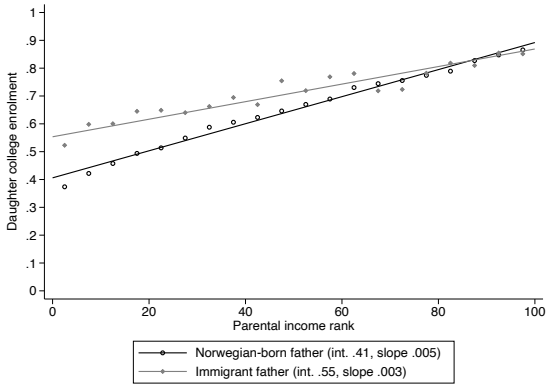
(b) Norway, sons, born 1992-1994



(c) Norway, daughters, born 1986-1988



(d) Norway, daughters, born 1992-1994

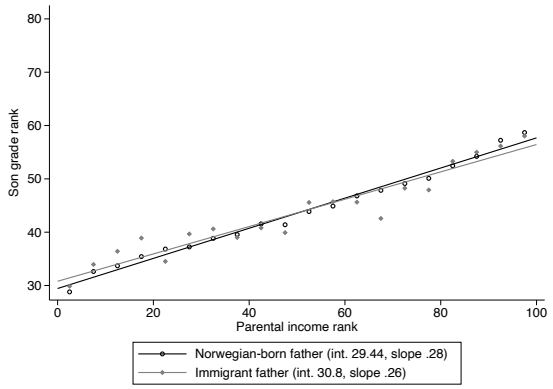


Notes: This figure plots estimates of Specification 1, regressing an indicator of college enrolment in the year the children turn 25 or earlier on the income rank of parents. Children born in 1986-1988 and 1992-1994 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2003-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

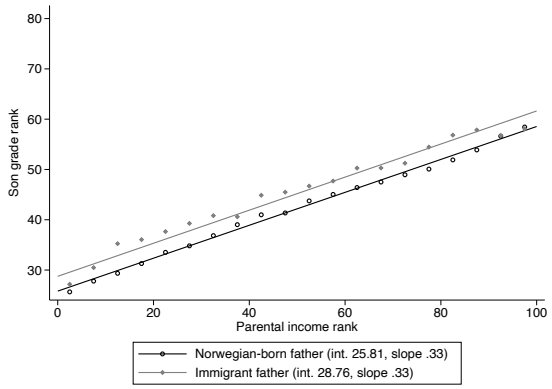
End-of-middle school grades

Figure C.10.31: Linked data: End-of-middle school grades, Norway, comparison across cohorts

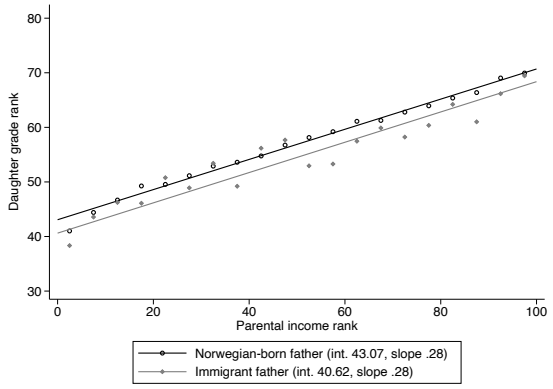
(a) Sons, born 1986-1988



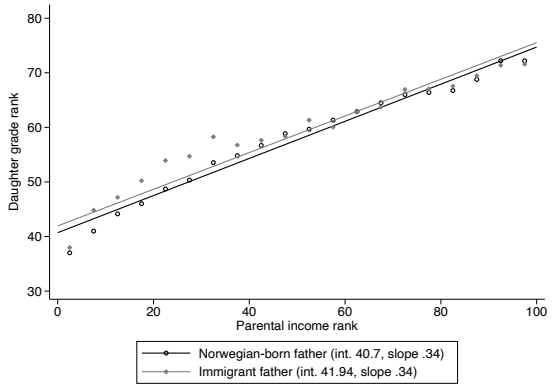
(b) Sons, born 1992-1994



(c) Daughters, born 1986-1988



(d) Daughters, born 1992-1994

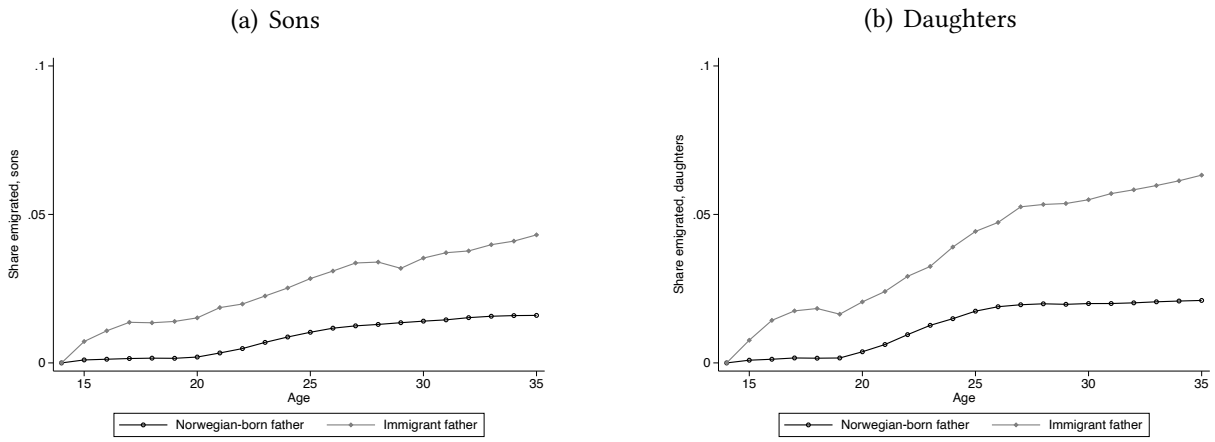


Notes: This figure plots estimates of Specification 1, regressing the average end-of-middle school grade ranks of sons/daughters on the income rank of parents. If children have not completed middle school by age 16, they are assigned the lowest possible grade. Children born in 1986-1988 and 2000-2002 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1997-2003 and 2011-2017 respectively. Parental income ranks, 0-100, are determined within cohorts.

C.10.5 Robustness

C.10.5.1 Emigration

Figure C.10.32: Norway, cumulative share of emigrated children

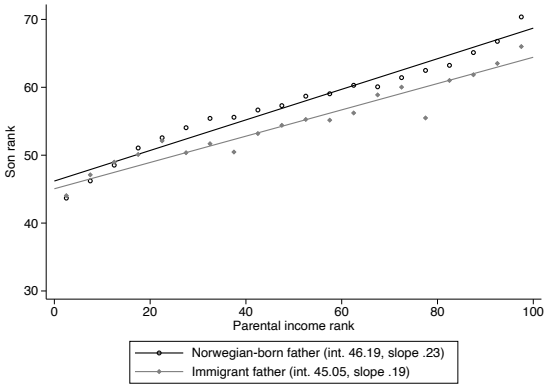


Notes: This figure shows the share of children who have emigrated (i.e. no longer living in Norway) across age groups. We consider all children who were part of the Norwegian population at age 14 and calculate the share of emigrated children as they age. If children move back to Norway after a period abroad, they are no longer counted as emigrants. Children born in 1978-1983. Immigration status is determined by father's country of birth.

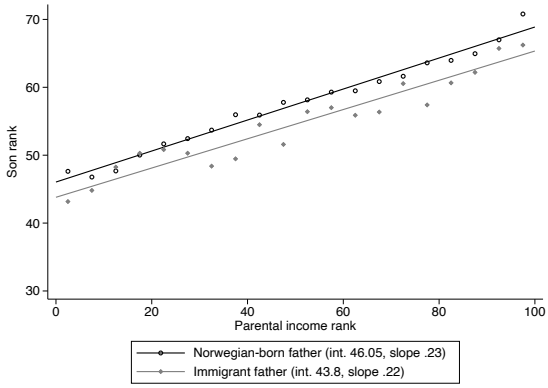
C.10.5.2 Additional years of parental income data

Figure C.10.33: Intergenerational mobility: Norway by number of years of parental income data

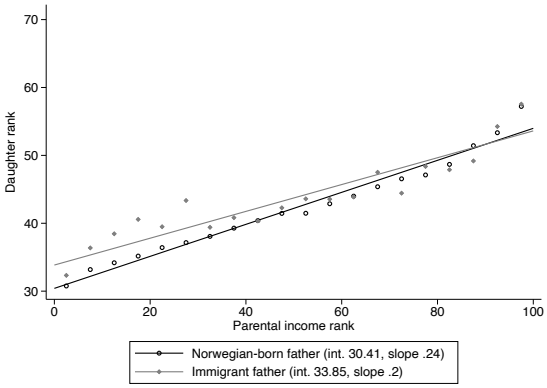
(a) Sons, parental income 1994-2000



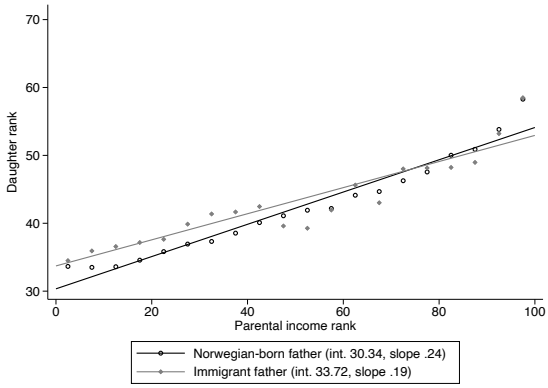
(b) Sons, parental income 1980-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1980-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1980-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.10.28: Intergenerational mobility estimates: Norway, parental income 1980-2000

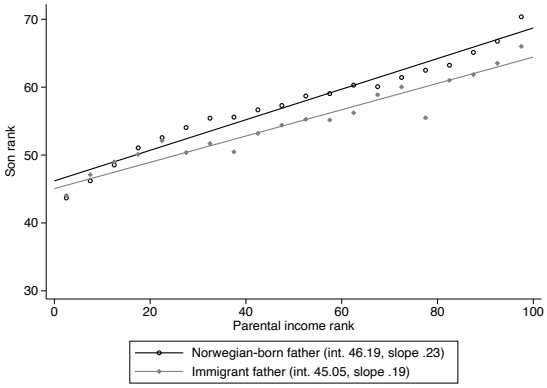
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-2.245***	3.372***
	(0.668)	(0.587)
Parents' rank	0.228***	0.238***
	(0.00274)	(0.00242)
Immigrant father # rank	-0.0129	-0.0454***
	(0.0129)	(0.0120)
Constant	46.05***	30.34***
	(0.159)	(0.133)
Observations	146,740	139,780
R-squared	0.050	0.069

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1980-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

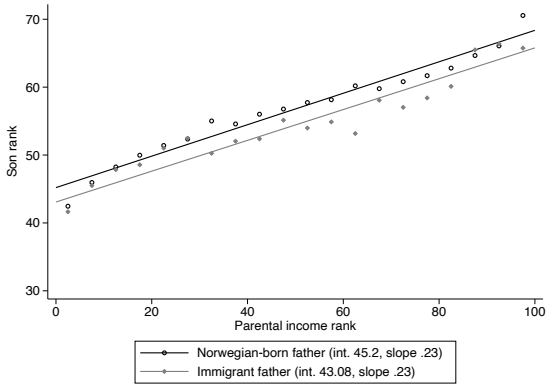
C.10.5.3 More recent birth cohorts, income rank

Figure C.10.34: Linked data: Intergenerational mobility, Norway, comparison across cohorts

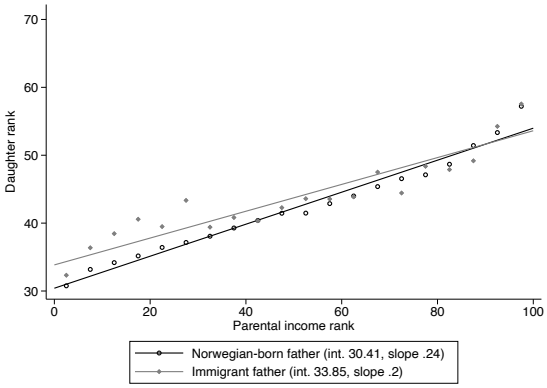
(a) Norway, sons, born 1978-1983



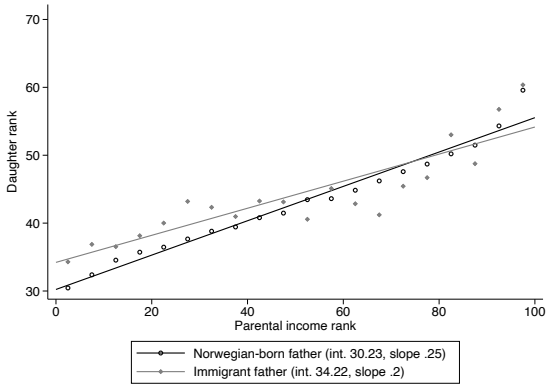
(b) Norway, sons, born 1982-1987



(c) Norway, daughters, born 1978-1983



(d) Norway, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.10.29: Linked data: Intergenerational mobility estimates, Norway, comparing cohorts

	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-1.139*	3.434***	-2.121***	3.991***
	(0.645)	(0.561)	(0.588)	(0.508)
Parents' rank	0.225***	0.236***	0.232***	0.253***
	(0.00274)	(0.00241)	(0.00275)	(0.00243)
Immigrant father # rank	-0.0315**	-0.0381***	-0.00467	-0.0537***
	(0.0128)	(0.0117)	(0.0116)	(0.0106)
Constant	46.19***	30.41***	45.20***	30.23***
	(0.157)	(0.132)	(0.158)	(0.133)
Observations	146,860	139,906	148,652	141,293
R-squared	0.048	0.068	0.051	0.076

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.11 Country-specific details & results: Sweden

C.11.1 Data details and deviations

We use administrative registers compiled by Statistics Sweden and held by the Institute for Evaluation of Labor Market and Education Policy (IFAU) to construct the datasets on children and parents. These data cover all individuals residing in Sweden from around 1980 to 2022 (ages 0–74). Specifically, we rely on FOB (*Folk- och bostadsräkningen*), LISA (*Longitudinell integrationsdatabas för sjukförsäkrings- och arbetsmarknadsstudier*), registers from the National Board of Education, a multi-generation register linking parents and children, and information on migration.

Access to these data is restricted and protected according to chapter 24, 8 § of the Public Access to Information and Secrecy Act (2009:400) https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/offentlighets--och-sekretesslag-2009400_sfs-2009-400. Researchers wanting to replicate results can apply for access to the analysis data from the IFAU https://www.ifau.se/.

C.11.1.1 Cross-sectional data

We use 1980-data from FOB and 2010-data from LISA to identify men residing in Sweden and calculate their income (variables "arbink" and "forvers", respectively). Parental status (any children present in the population), age, and country/region of birth are determined from the multi-generation register.

Our income measure includes labor earnings, business income, taxable benefits and some labor-related benefits, such as short-term sick pay and parental benefits; capital income, pensions and long-term sickness and parental leave benefits are not included. It thereby deviates from the Danish measure of total income. We only observe capital income from 1990 and onwards, which is why this is not included in the cross-sectional comparison.

C.11.1.2 Linked data

We use 2014- and 2015-data from LISA to identify individuals residing in Sweden and calculate their income (variables "forvers" and "kapink"). The multi-generation register provides year of birth, parental IDs, information on legal sex, and region/country of birth of both parents and children. Parental income from 1994 to 2000 is also retrieved from LISA.

Our main income measure differs from the Danish measure of total income in the comparison based on linked data too, but in contrast to the measure used in the cross sectional comparison, we here include capital income in addition to labor earnings, business income, taxable benefits and (some) labor-related benefits. As a robustness check, we also do the main comparisons using a measure of disposable income (the sum of labor earnings, business income, capital income, child benefits, sick pay and other benefits after tax; "dispinc04" from the LISA register).

The comparison using additional years of parental income is based on the same income measure as the cross-sectional comparison, as we do not have access to capital income data before 1990. This analysis deviates from the Danish case also in that we measure parental income 1985–2000 rather than 1980–2000, due to data restrictions.

We do not control for parental wealth in the linked data comparison with various sets of controls, as we do not have access to such data.

C.11.1.3 Additional notes on deviations

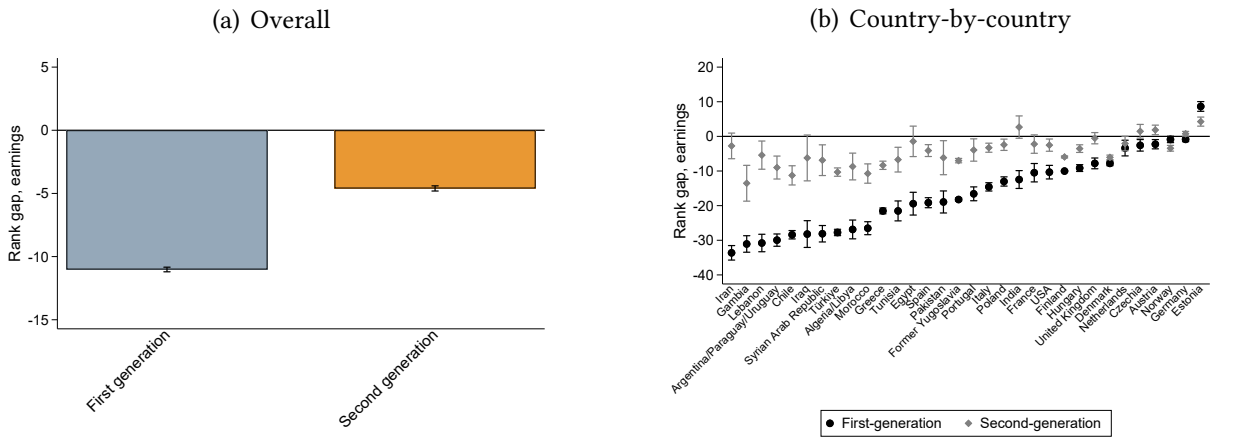
The Swedish data include a mix of countries and regions of birth (95 categories), which means our measure is less granular than that used in the Danish comparisons. We group all countries that were part of former Yugoslavia, which leaves us with 89 categories.

We only observe individuals in LISA from age 16. The emigration figure for Sweden is therefore based on individuals aged 16–35, rather than 14–35, as in the Danish case.

Educational outcomes are retrieved from registers from the National Board of Education (variables "meritvarde" from the primary school graduation register and "ffgar", first registration, from post secondary education data). We only observe primary school grades for cohorts born 1988 and later. The first comparison of grades is therefore based on cohorts born 1988–1990, rather than 1986–1988, as in the case of Denmark. We consequently measure parental income 1999–2005 rather than 1997–2003 for this analysis.

C.11.2 Cross-sectional results

Figure C.11.35: Cross-sectional results using earnings: Sweden, 1980-2010 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the earnings of fathers and sons in 1980 and 2010 respectively. We use measures of earnings for both generations. Panel a) includes a non-SE dummy rather than country-of-origin dummies. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.11.30: Cross-sectional data: Summary statistics, Sweden

Fathers: 1980 cohort

	Immigrants	Sweden-born	Diff.	Std. Error
Age	39.049	38.957	-0.091***	0.020
Rank gap, earnings	40.182	51.204	11.022***	0.094
ln(earnings)	6.464	6.632	0.168***	0.002
Earnings > 0	0.955	0.985	0.031***	0.000
Share of population	0.109	0.891		
N	103,425	843,516		

Sons: 2010 cohort

	Immigrant father	Sweden-born father	Diff.	Std. Error
Age	39.541	40.301	0.761***	0.021
Rank gap, earnings	45.786	50.391	4.605***	0.101
ln(earnings)	7.975	8.061	0.087***	0.003
Earnings > 0	0.876	0.925	0.049***	0.001
Share of population	0.085	0.915		
N	89,643	965,805		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1980 and 2010 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.11.3 Main results

C.11.3.1 Summary statistics

Table C.11.31: Linked data: Summary statistics, Sweden

Sons

	Immigrant father	Sweden-born father	Diff.	Std. Error
Child age	33.485	33.504	0.019*	0.011
Child income rank	52.281	58.526	6.245***	0.187
Child labour force participation	0.895	0.945	0.049***	0.001
Mother's age at child birth	27.548	27.889	0.340***	0.032
Father's age at child birth	31.075	30.457	-0.618***	0.036
Parental income rank	34.329	51.728	17.399***	0.183
Child share of population	0.102	0.898		
N	26,600	234,407		

Daughters

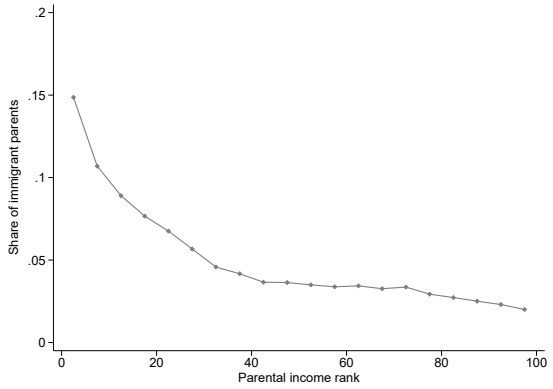
	Immigrant father	Sweden-born father	Diff.	Std. Error
Child age	33.476	33.513	0.037***	0.011
Child income rank	39.281	41.954	2.673***	0.174
Child labour force participation	0.894	0.937	0.042***	0.002
Mother's age at child birth	27.542	27.876	0.334***	0.033
Father's age at child birth	31.013	30.456	-0.557***	0.037
Parental income rank	34.591	51.816	17.225***	0.188
Child share of population	0.103	0.897		
N	25,409	222,088		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$
.

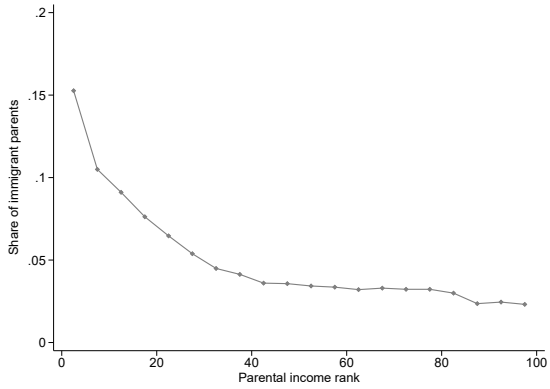
C.11.3.2 Parental income distribution

Figure C.11.36: Linked data: Sweden, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

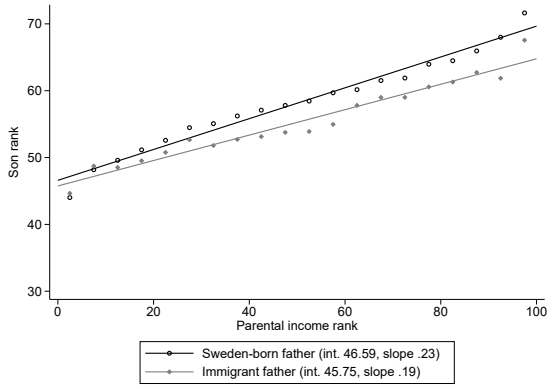


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

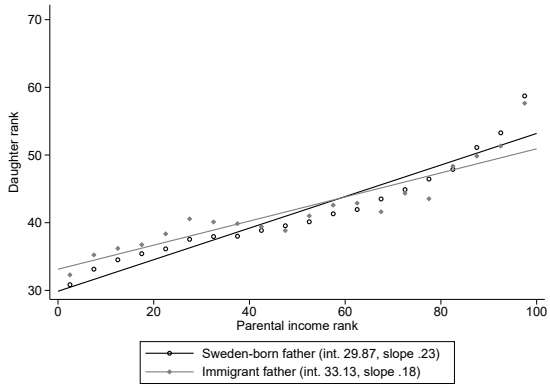
C.11.3.3 Rank-rank relationship

Figure C.11.37: Linked data: Intergenerational mobility, Sweden

(a) Sweden, sons



(b) Sweden, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.11.32: Linked data: Intergenerational mobility estimates, Sweden

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.843***	3.252***
	(0.326)	(0.281)
Parents' rank	0.231***	0.233***
	(0.00209)	(0.00195)
Immigrant father # rank	-0.0405***	-0.0552***
	(0.00707)	(0.00638)
Constant	46.59***	29.87***
	(0.123)	(0.109)
Observations	261,007	247,497
R-squared	0.054	0.061

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.11.3.4 Oaxaca-Blinder decomposition

Table C.11.33: Oaxaca-Blinder decompositions, child income rank, Sweden

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: immigrant father	52.28***	52.28***	52.28***	39.28***	39.28***	39.28***
	(0.192)	(0.192)	(0.192)	(0.171)	(0.171)	(0.171)
Mean child income rank: no immigrant father	58.53***	58.53***	58.53***	41.95***	41.95***	41.95***
	(0.0590)	(0.0590)	(0.0590)	(0.0557)	(0.0557)	(0.0557)
Difference in means	−6.245***	−6.245***	−6.245***	−2.673***	−2.673***	−2.673***
	(0.201)	(0.201)	(0.201)	(0.179)	(0.179)	(0.179)
Total explained difference	−3.941***	−4.013***	−3.309***	−3.916***	−4.016***	−3.065***
due to differences in parental income distributions	(0.0543)	(0.0559)	(0.123)	(0.0539)	(0.0557)	(0.110)
Total unexplained difference	−2.304***	−2.232***	−2.936***	1.243***	1.343***	0.392*
due to differences in mobility parameters	(0.201)	(0.201)	(0.228)	(0.179)	(0.178)	(0.211)
- Parental income rank*(relative mobility)*	−1.461***	−1.389***	−2.093***	−2.009***	−1.909***	−2.860***
	(0.255)	(0.243)	(0.366)	(0.232)	(0.221)	(0.331)
- Intercept*(absolute mobility)*	−0.843***	−0.843***	−0.843***	3.252***	3.252***	3.252***
	(0.326)	(0.326)	(0.326)	(0.281)	(0.281)	(0.281)
Observations	261,007	261,007	261,007	247,497	247,497	247,497

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.11.4 Mechanisms

C.11.4.1 Various sets of controls

Table C.11.34: Linked data: Intergenerational mobility estimates with various sets of controls, Sweden

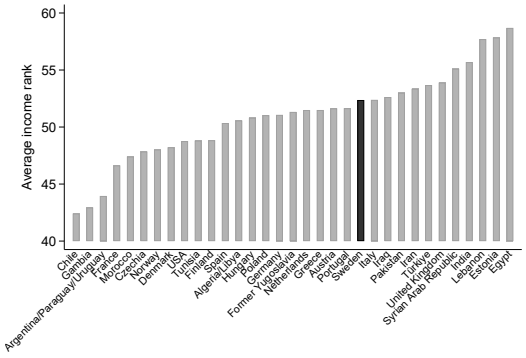
VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Sons	(6) Sons	(7) Sons	(8) Daughters	(9) Daughters	(10) Daughters	(11) Daughters	(12) Daughters	(13) Daughters	(14) Daughters
Immigrant father = 1	-0.843***	-1.385***	-0.970***	-0.475	-0.377	-0.827**	-0.474	3.252***	1.648***	1.590***	2.187***	2.246***	1.365***	1.351***
	(0.326)	(0.331)	(0.334)	(0.335)	(0.336)	(0.337)	(0.339)	(0.281)	(0.285)	(0.288)	(0.287)	(0.289)	(0.289)	(0.292)
Parents' rank	0.231***	0.228***	0.228***	0.229***	0.223***	0.225***	0.225***	0.233***	0.228***	0.223***	0.233***	0.221***	0.225***	0.221***
	(0.00209)	(0.00215)	(0.00218)	(0.00246)	(0.00255)	(0.00249)	(0.00252)	(0.00195)	(0.00200)	(0.00202)	(0.00231)	(0.00240)	(0.00234)	(0.00236)
Immigrant father # rank	-0.0405***	-0.0367***	-0.0403***	-0.0394***	-0.0391***	-0.0383***	-0.0409***	-0.0552***	-0.0425***	-0.0416***	-0.0353***	-0.0356***	-0.0327***	-0.0328***
	(0.00707)	(0.00709)	(0.00710)	(0.00715)	(0.00717)	(0.00715)	(0.00716)	(0.00638)	(0.00638)	(0.00639)	(0.00643)	(0.00643)	(0.00642)	(0.00643)
Constant	46.59***	47.85***	48.30***	44.89***	47.05***	46.01***	46.79***	29.87***	33.66***	35.36***	30.67***	28.58***	33.76***	34.14***
	(0.123)	(0.198)	(0.400)	(0.260)	(2.249)	(0.295)	(0.437)	(0.109)	(0.185)	(0.352)	(0.225)	(2.089)	(0.263)	(0.383)
Observations	261,007	261,007	261,007	261,007	261,007	261,007	261,007	247,497	247,497	247,497	247,497	247,497	247,497	247,497
R-squared	0.054	0.056	0.059	0.058	0.060	0.060	0.063	0.061	0.067	0.070	0.069	0.073	0.072	0.075
Parental region	0	1	0	0	0	1	0	0	1	0	0	0	1	0
Parental municipality	0	0	1	0	0	0	1	0	0	1	0	0	0	1
Parental industry, 2-digit	0	0	0	1	0	1	1	0	0	0	1	0	1	1
Parental industry, 3-digit	0	0	0	0	1	0	0	0	0	0	0	1	0	0

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Other parental characteristics are all determined in 1994 and included as fixed effects. We have 289 municipality categories and 25 region categories (including categories for unknown region/municipality). Parental industries include categories for unknown industry as well as no industry (if not working). Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

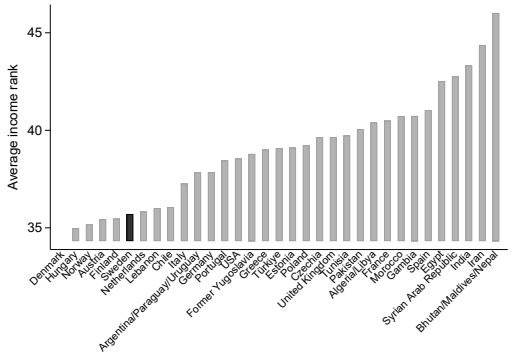
C.11.4.2 Heterogeneity across sending countries

Figure C.11.38: Average income at 25th percentile: Sweden

(a) Sons



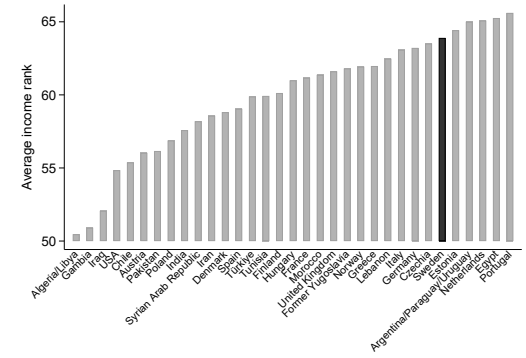
(b) Daughters



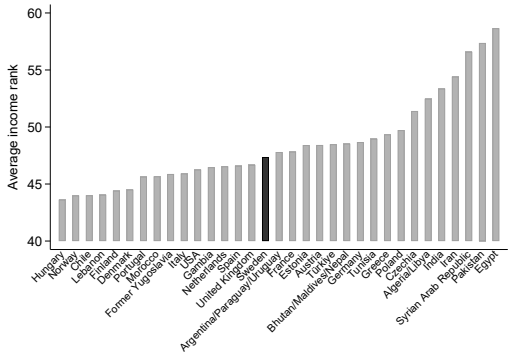
Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.11.39: Average income at 75th percentile: Sweden

(a) Sons



(b) Daughters



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.11.4.3 Employment

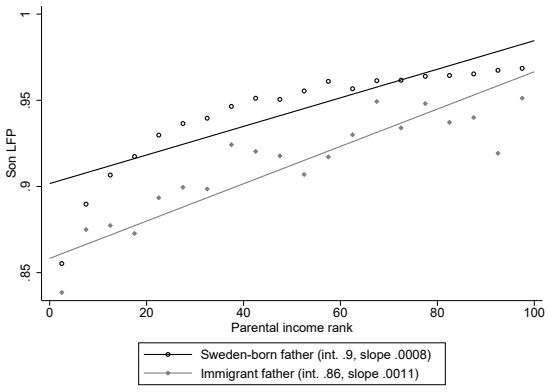
Table C.11.35: Linked data: Intergenerational mobility estimates, employment, Sweden

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0434***	-0.0321***
	(0.00318)	(0.00325)
Parents' rank	0.000829***	0.000958***
	(1.68e-05)	(1.77e-05)
Immigrant father # rank	0.000254***	0.000177***
	(6.03e-05)	(6.02e-05)
Constant	0.902***	0.887***
	(0.00111)	(0.00118)
Observations	261,007	247,497
R-squared	0.017	0.018

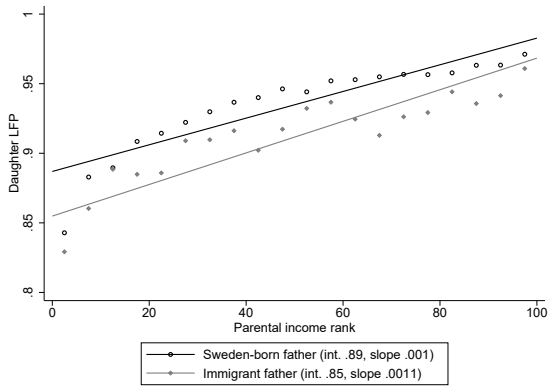
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.11.40: Linked data: Intergenerational mobility, employment, Sweden

(a) Sweden, sons



(b) Sweden, daughters

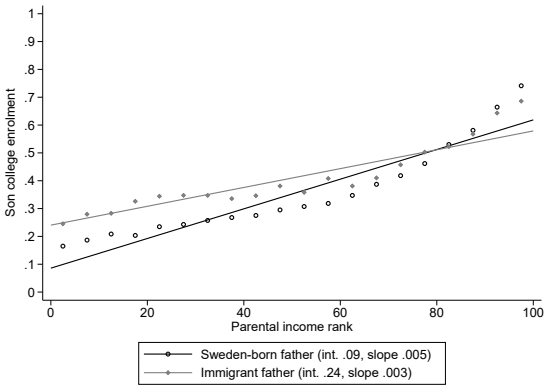


Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

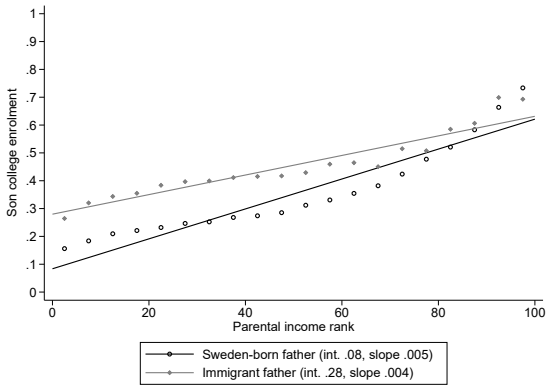
C.11.4.4 Educational mobility

Figure C.11.41: Linked data: College enrolment by age 25, Sweden, comparison across cohorts

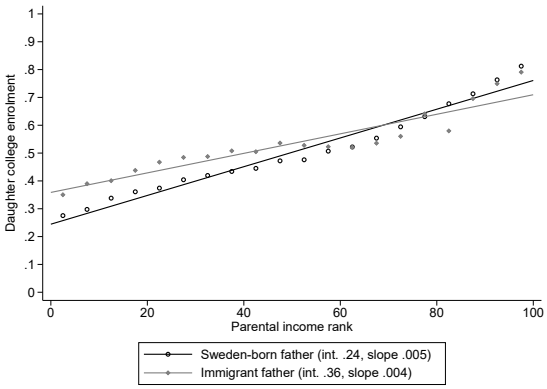
(a) Sweden, sons, born 1988-1990



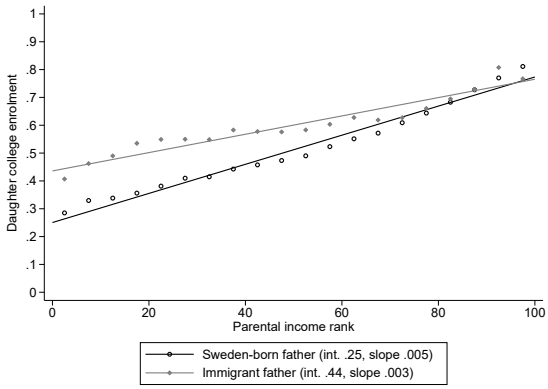
(b) Sweden, sons, born 1992-1994



(c) Sweden, daughters, born 1988-1990



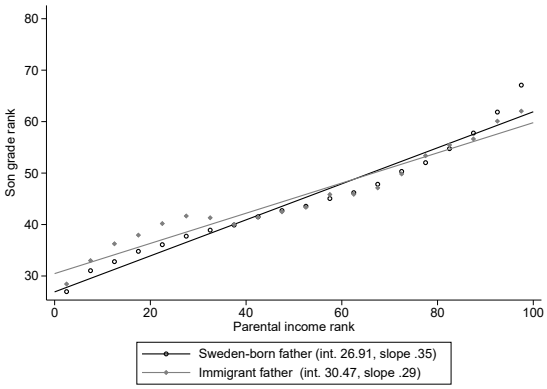
(d) Sweden, daughters, born 1992-1994



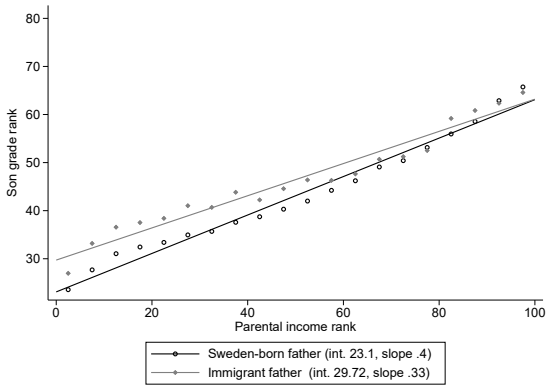
Notes: This figure plots estimates of Specification 1, regressing an indicator of college enrolment in the year the children turn 25 or earlier on the income rank of parents. Children born in 1988-1990 and 1992-1994 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1999-2005 and 2003-2009 respectively. Parental income ranks, 0-100, are determined within cohorts.

Figure C.11.42: Linked data: Primary school grades, Sweden, comparison across cohorts

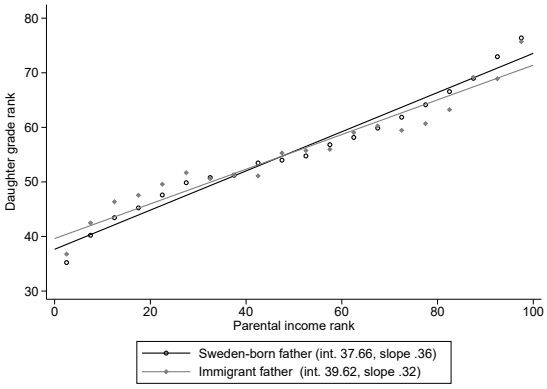
(a) Sweden, sons, born 1988-1990



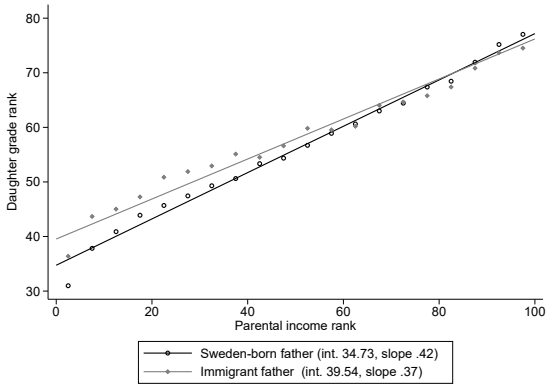
(b) Sweden, sons, born 2000-2002



(c) Sweden, daughters, born 1988-1990



(d) Sweden, daughters, born 2000-2002



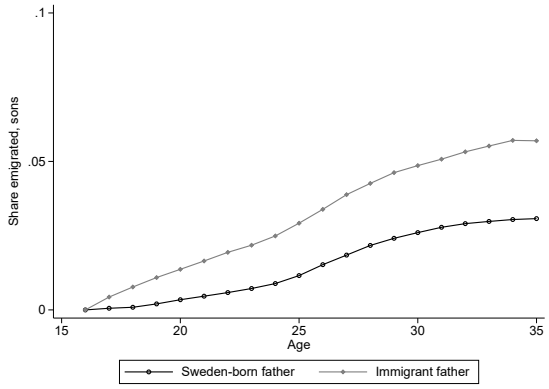
Notes: This figure plots estimates of Specification 1, regressing the average primary school grade ranks of sons/daughters on the income rank of parents. If children have not completed school by age 17, they are assigned the lowest possible grade. Children born in 1988-1990 and 2000-2002 respectively. Immigration status is determined by father's country of birth. Parental income measured in 1999-2005 and 2011-2017 respectively. Parental income ranks, 0-100, are determined within cohorts.

C.11.5 Robustness

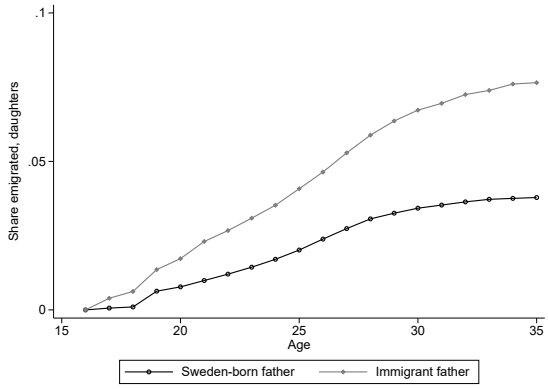
C.11.5.1 Emigration

Figure C.11.43: Sweden, cumulative share of emigrated children

(a) Sons



(b) Daughters

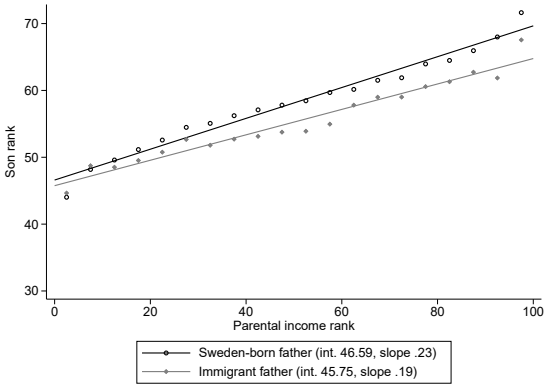


Notes: This figure shows the share of children who have emigrated (i.e. are no longer living in Sweden) across age groups. We consider all children who were part of the Swedish population at age 16 and calculate the share of emigrated children as they age. If children move back to Sweden after a period abroad, they are no longer counted as emigrants. Children born in 1978-1983. Immigration status is determined by father's country of birth.

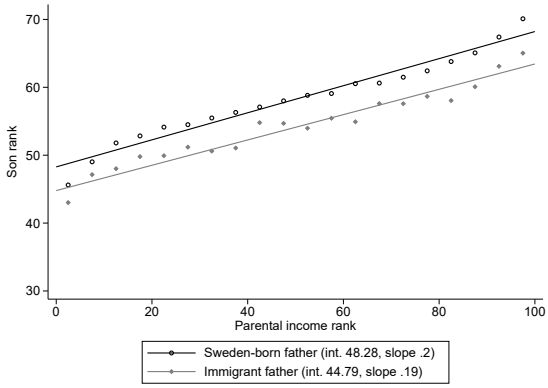
C.11.5.2 Additional years of parental income data

Figure C.11.44: Intergenerational mobility: Sweden, by number of years of parental income data

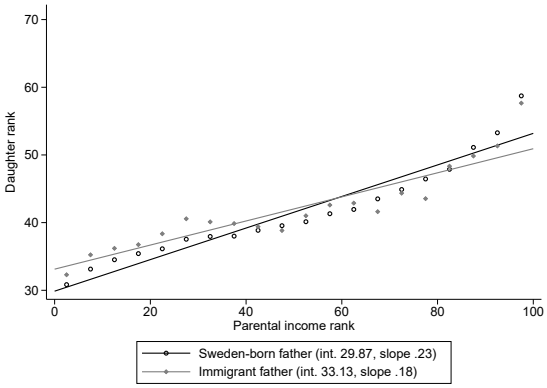
(a) Sons, parental income 1994-2000



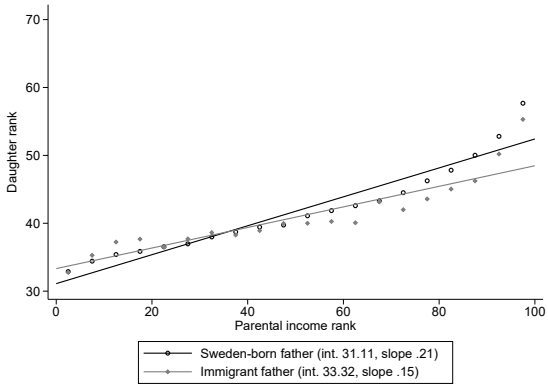
(b) Sons, parental income 1985-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1985-2000



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1985-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.11.36: Intergenerational mobility estimates: Sweden, parental income 1985-2000

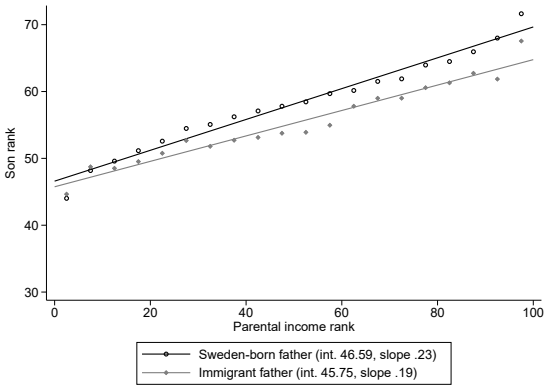
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-3.490***	2.215***
	(0.329)	(0.284)
Parents' rank	0.199***	0.213***
	(0.00209)	(0.00196)
Immigrant father # rank	-0.0129*	-0.0616***
	(0.00663)	(0.00599)
Constant	48.28***	31.11***
	(0.122)	(0.109)
Observations	264,979	251,292
R-squared	0.043	0.052

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1985-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

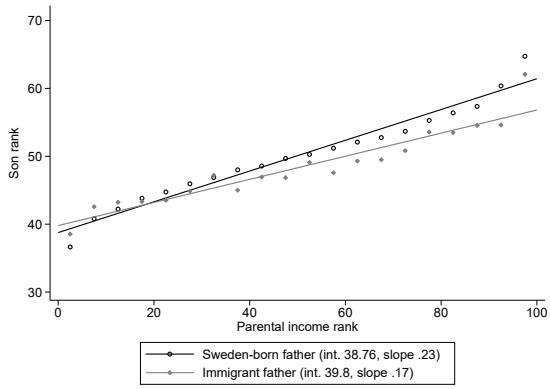
C.11.5.3 More recent birth cohorts, income rank

Figure C.11.45: Linked data: Intergenerational mobility, Sweden, comparison across cohorts

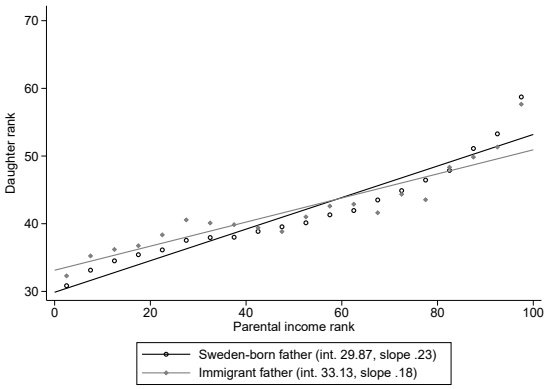
(a) Sweden, sons, born 1978-1983



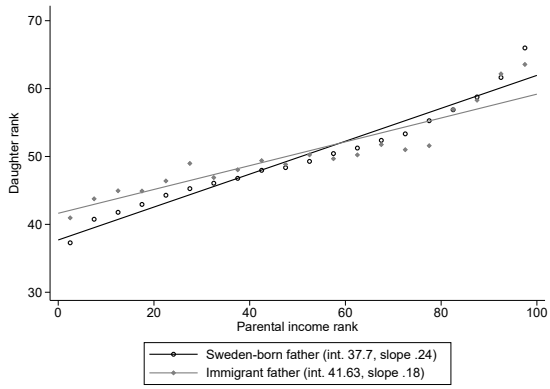
(b) Sweden, sons, born 1982-1987



(c) Sweden, daughters, born 1978-1983



(d) Sweden, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.11.37: Linked data: Intergenerational mobility estimates, Sweden, comparing cohorts

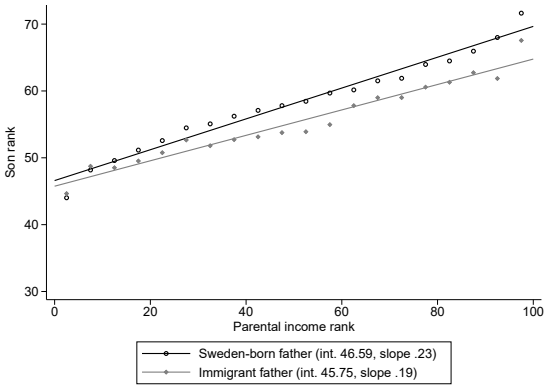
	(1)	(2)	(3)	(4)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-0.843***	3.252***	1.031***	3.931***
	(0.326)	(0.281)	(0.299)	(0.304)
Parents' rank	0.231***	0.233***	0.227***	0.242***
	(0.00209)	(0.00195)	(0.00205)	(0.00209)
Immigrant father # rank	-0.0405***	-0.0552***	-0.0564***	-0.0669***
	(0.00707)	(0.00638)	(0.00660)	(0.00665)
Constant	46.59***	29.87***	38.76***	37.70***
	(0.123)	(0.109)	(0.117)	(0.121)
Observations	261,007	247,497	273,281	258,651
R-squared	0.054	0.061	0.050	0.054

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

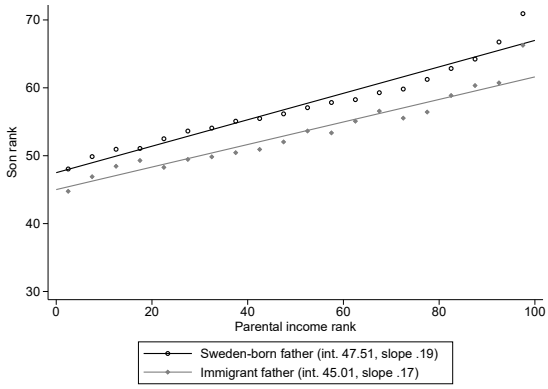
C.11.5.4 Alternative income measure, income rank

Figure C.11.46: Linked data: Intergenerational mobility, Sweden, comparison across income measures

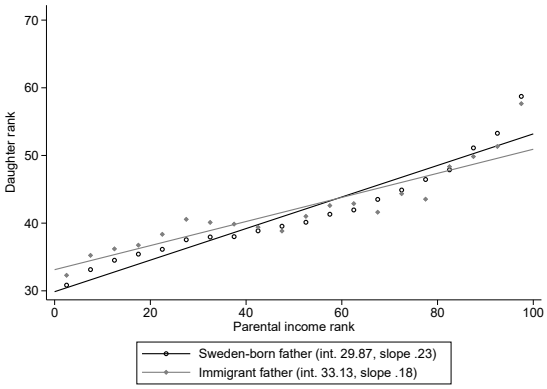
(a) Sweden, sons, main



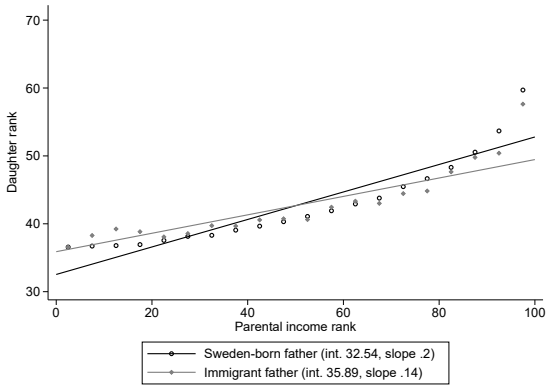
(b) Sweden, sons, disposable income



(c) Sweden, daughters, main



(d) Sweden, daughters, disposable income



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Main income measure and disposable income respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income in 1994-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.11.38: Linked data: Intergenerational mobility estimates, Sweden, comparing income measures

VARIABLES	(1) Sons main	(2) Daughters main	(3) Sons disp inc	(4) Daughters disp inc
Immigrant father = 1	-0.843***	3.252***	-2.494***	3.356***
	(0.326)	(0.281)	(0.333)	(0.293)
Parents' rank	0.231***	0.233***	0.195***	0.203***
	(0.00209)	(0.00195)	(0.00210)	(0.00199)
Immigrant father # rank	-0.0405***	-0.0552***	-0.0288***	-0.0668***
	(0.00707)	(0.00638)	(0.00705)	(0.00639)
Constant	46.59***	29.87***	47.51***	32.54***
	(0.123)	(0.109)	(0.121)	(0.110)
Observations	261,007	247,497	264,885	251,190
R-squared	0.054	0.061	0.040	0.045

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (1) & (2): Main income measure. Columns (3) & (4): Alternative income measure, disposable income. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.12 Country-specific details & results: Spain

C.12.1 Data details and deviations

We use the Spanish Opportunity Atlas (Soria, 2022), augmented with individuals' country-of-birth information. This database features information from the tax records of the Spanish Tax Agency, focusing on the population of parents whose children were born between 1980 and 1990, with information on those children when they became adults. Specifically, we observe parents' and children's outcomes from 1998 to 2022, covering more than 3 million children, which represents around 90% of the children born between 1980 and 1990 in Spain (excluding the Basque Country and Navarre regions). We measure parental household income between 1998 and 2000 (and also separately for fathers and mothers), and children's individual income in 2021 and 2022, when the children are between 31 and 42 years old. Our measure of income is defined ad total gross income (labour income, capital income and self-employed income), both at the household and individual level, for both generations.

Some features of the database are worth noting. First, in Spain, there are two fiscal regimes: the special regime (for the Basque Country and Navarra) and the general regime (for the rest of Spain). These data exclude households from the the Basque Country and Navarra regions because it uses tax returns of people living the general regime territory. Second, parent households are included in the data if they filed tax returns in 1998, claiming children born between 1980 and 1990 as dependents. As such, parents who did not file income tax returns in 1998—likely among the poorest in Spain—are excluded from the data. However, since the minimum personal income threshold for filing a return was 550,000 *pesetas* (about €6,000 in 2024 Euro), the share of households with at least one child below this threshold is likely very small. Finally, the dataset does not include information on employment nor educational attainment.

C.12.2 Immigration in Spain: Immigrants in our sample and immigrants nowadays

Spain had a very low number of immigrants up until the end of the 20th century. From 2000-2009, there was an exceptional immigration boom which drove the percentage of foreigners in the population from less than 2% in 1998 to about 12% in 2009.[54] The countries that fed most of this immigration boom were Romania, Morocco, and Latin American countries such as Colombia and Ecuador.

Since the immigrant parents in our sample where residing in Spain in 1998, they are representative of the small pre-2000s immigrant community in Spain, not the vast majority of immigrants in Spain nowadays. Among our sample of children, only 1.36% have a foreign-born father. Unfortunately, it is still too early to properly study the labor market outcomes of the children of immigrants who arrived during the early 2000s, as the earliest 2nd generation immigrants from this wave are currently in their early twenties.

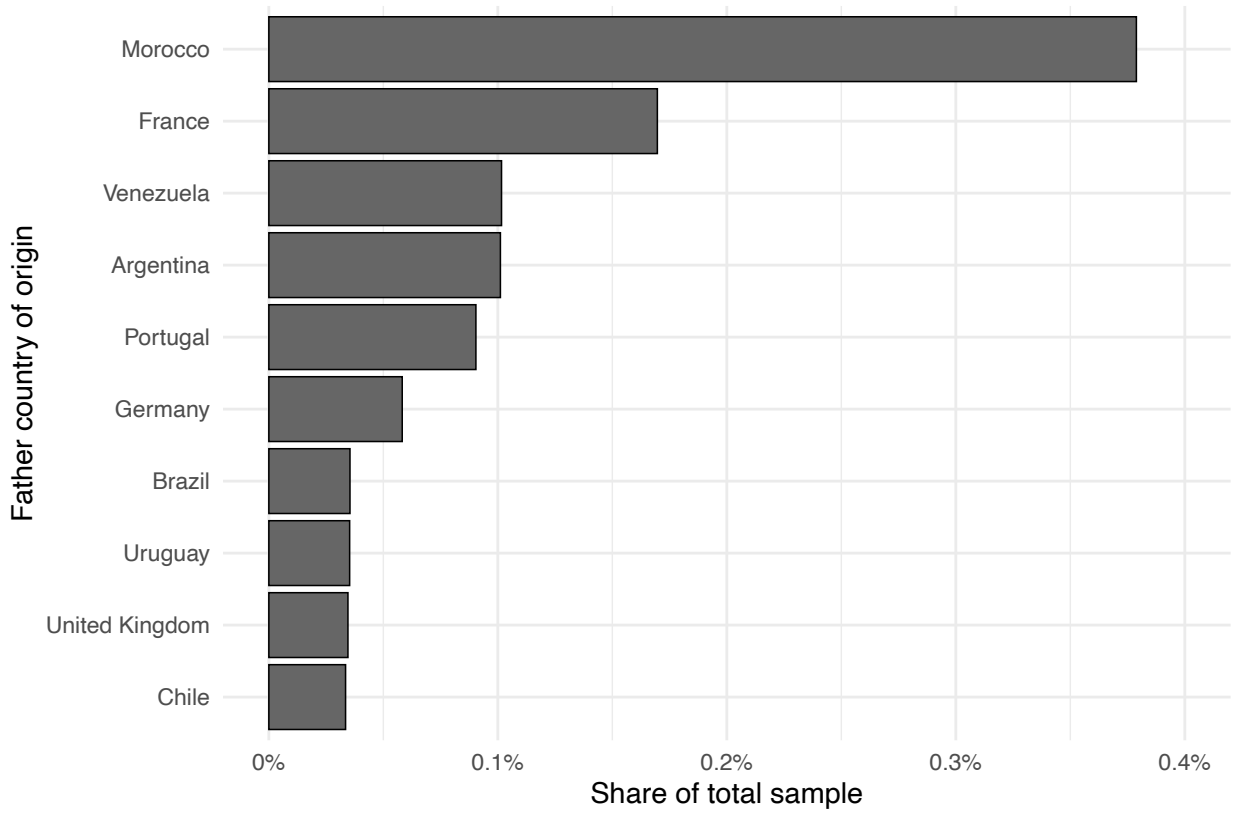
Two facts illustrate how the composition of first-generation immigrants we study in this paper is quite different from the composition of immigrants nowadays. First, C.12.47 shows the

[54] These percentages, from the Spanish Statistical Institute, refer to "foreigners" on the basis on nationality. Our analyses instead define immigrants based on place of birth.

distribution of top 10 fathers' country of origin in our sample [55]. While some countries in our sample are still top sending countries nowadays (i.e. Morocco or Venezuela), we are missing the huge influx of Latin American and Eastern Europe immigration that took place during the first decade of this century and therefore other modern top sending countries are not represented (i.e. Ecuador, Colombia, Romania, Peru). Second, our results in Figure C.12.48 show that immigrants in 1998–2000 on average earned more than natives. This is consistent with the notion that the small minority of immigrants that resided in Spain before the 2000s were positively selected in terms of their skills and labor market opportunities in Spain.

C.12.3 Additional summary statistics and results for Spain

Figure C.12.47: Country of birth distribution for non-Spanish fathers (Spain)

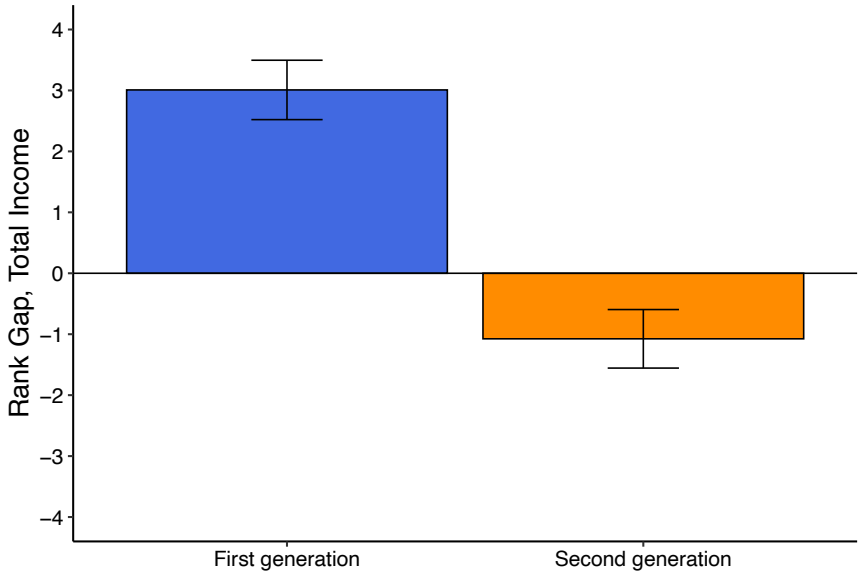


Notes: Ten most common countries of origin among our sample of non-Spanish fathers. The horizontal axis represents the share each group represents, out of the total sample of fathers (including Spanish ones). 1% of all fathers are born outside Spain.

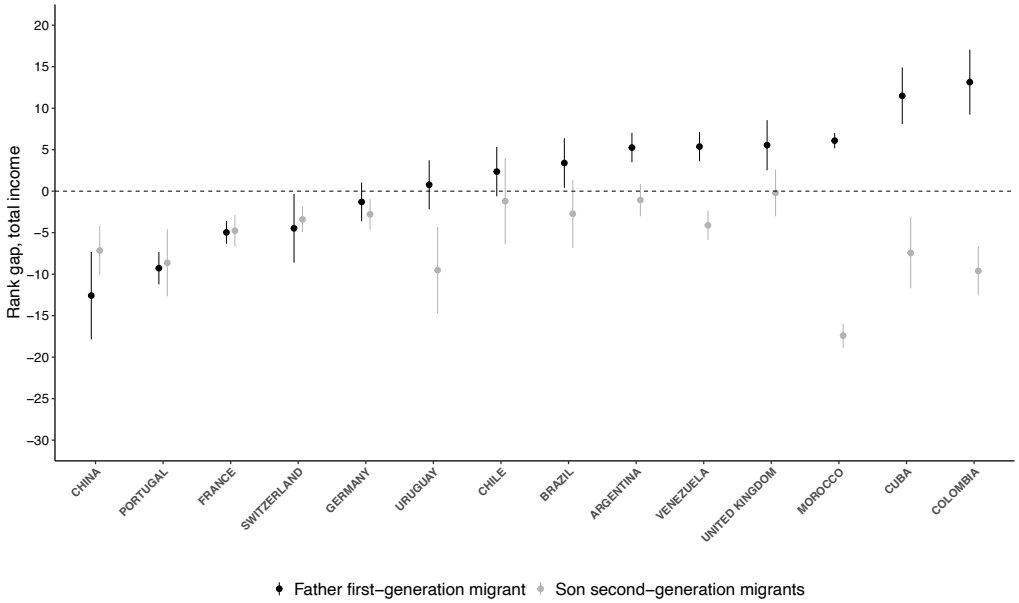
[55] In the Spanish Opportunity Atlas, a significant majority, 98.6%, of individuals in the sample have a father of Spanish origin. In contrast, only a small fraction, 1.36%, have a father who is foreign-born. If we focus on fathers, 99% of them are Spain-born and 1% are foreign-born

Figure C.12.48: Cross-sectional immigrant-native income gap (Spain)

(a) Overall gaps



(b) Country-specific gaps



Notes: Estimated coefficients and 95%-confidence interval for the immigrant-native income gap, for first-generation and second-generation immigrants (equation (1) from Abramitzky et al. (2021)) for income of fathers and sons measured in 1998-2000 an 2021-2022 respectively. Panel b) is reported for the countries of origin that are most common for non-Spanish born fathers.

Table C.12.39: Summary statistics, cross-sectional sample (Spain)

Fathers: income measured in 1998-2000

	Immigrant	Spanish-born	Diff.	Std. Error
Age	44.5	45.3	-0.75***	0.039
Rank gap, earnings	53.59	50.45	3.13***	0.17
Share of population	1.32%	98.67%		
N	28009	2083199		

Sons: income measured in 2021-2022

	Immigrant Father	Spanish-born Father	Diff.	Std. Error
Age	36.32	36.78	-0.46***	0.017
Rank gap, earnings	50.53	50.78	-0.24	0.17
Share of population	1.36%	98.63%		
N	28017	2023665		

Notes: Summary statistics of the cross-sectional sample, including father information measured between 1998-2000 and sons information measured between 2021-2022. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C.12.40: Summary statistics, linked sample (Spain)

Sons

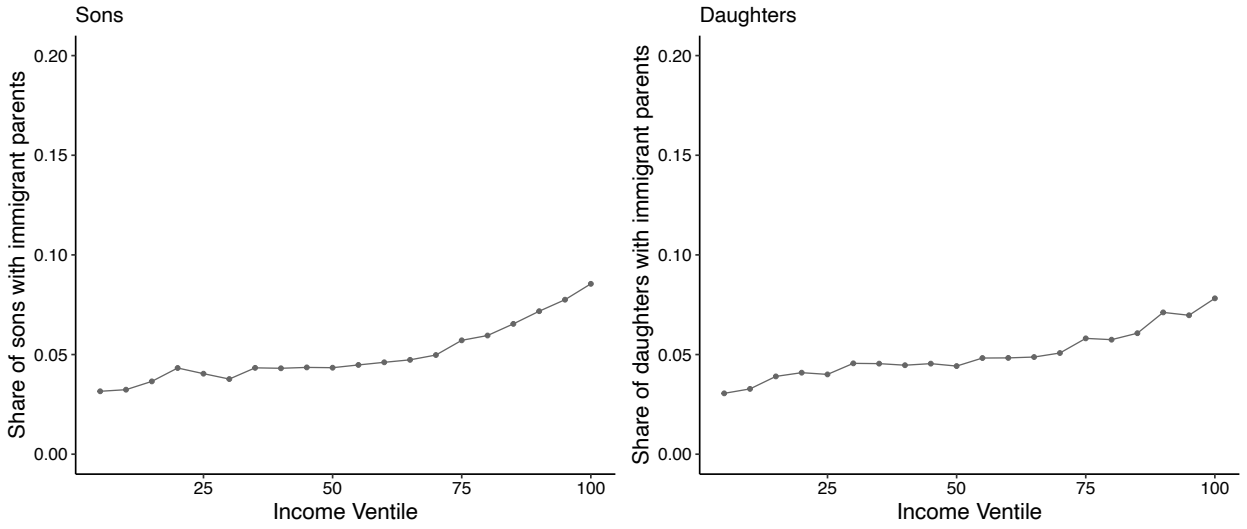
	Immigrant father	Spanish-born father	Diff.	Std. Error
Child age	36.20	36.65	-0.44***	0.025
Child income rank	54	54.65	-0.64**	0.027
Father's age at child birth	30.15	30.44	-0.29 ***	0.049
Parental income rank	56.57	51.18	5.39***	0.027
Child share of population	1.24%	98.75%		
N	13904	1100327		

Daughters

	Immigrant father	Spanish-born father	Diff.	Std. Error
Child age	36.43	36.96	-0.52***	0.025
Child income rank	47.10	46.58	0.51**	0.026
Father's age at child birth	30.07	30.35	-0.28 ***	0.005
Parental income rank	55.36	49.72	5.64***	0.026
Child share of population	1.19%	98.81%		
N	14105	1168063		

Notes: This table reports summary statistics of the estimation sample. Children born in 1980. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income 1998-2000. Spanish data does not include wealth variables. Child age is measured in 2022. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

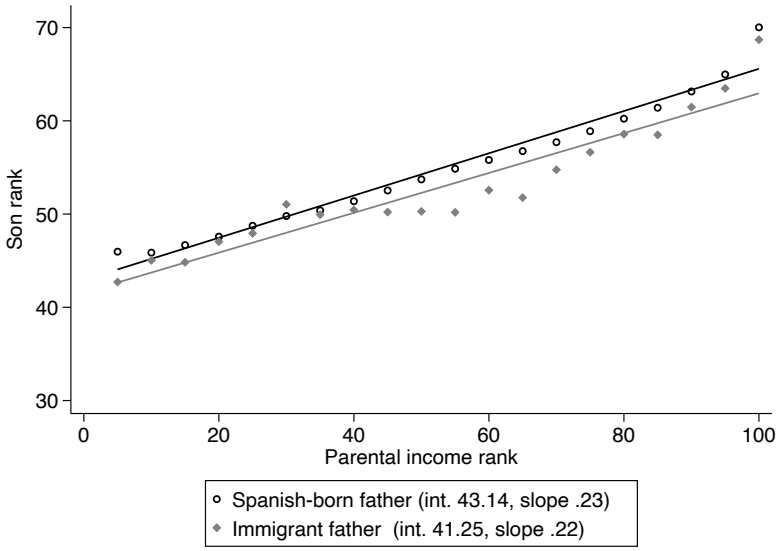
Figure C.12.49: Parental income distribution for children of immigrants (Spain)



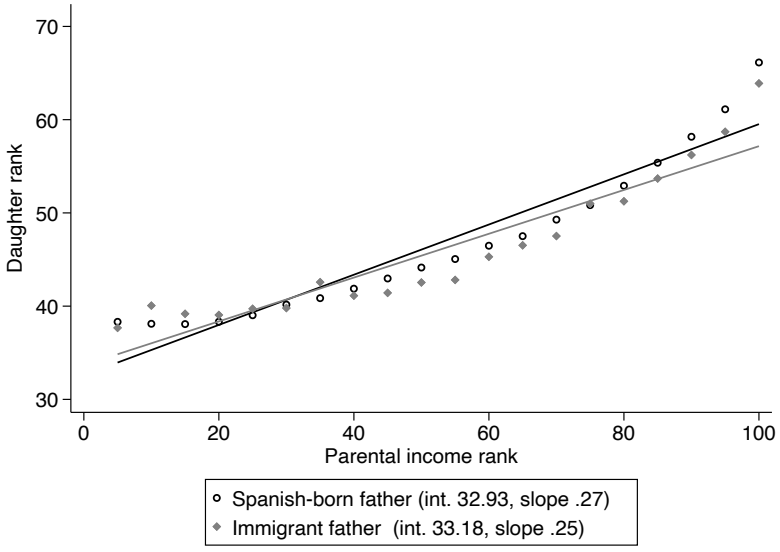
Notes: Share of children of immigrant parents in each ventile of the parental income distribution, out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1980-1990. Immigration status is determined by father's country of birth. Parental income measured in 1998-2000. Income ranks, 0-100, determined within child cohorts.

Figure C.12.50: Income rank-rank relationship: Children of Spanish-born and children of immigrants

(a) Sons



(b) Daughters



Notes: Rank-rank relationship between the income of parents and children, separately for children of Spanish-born and foreign-born parents. Children born in 1980-1990. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts.

Table C.12.41: Income rank-rank intergenerational mobility estimates (Spain)

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-1.883***	0.241***
	(0.511)	(0.502)
Parents' rank	0.225***	0.269***
	(0.0009)	(0.0009)
Immigrant father =1 × Parents' rank	-0.002	-0.019
	(0.008)	(0.008)
Intercept	43.13***	32.93***
	(0.058)	(0.055)
Observations	999,748	1,056,384
R-squared	0.054	0.076

Notes: Estimates from a regression of the income ranks of sons/daughters on that of parents, with separate intercept and slope for children of immigrant parents and children of Spanish-born parents. Children born in 1980-1990. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income 1998-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table C.12.42: Oaxaca-Blinder decompositions, child income rank (Spain)

	Sons: pooled	Sons: non-immi. ref.	Sons: immi. ref.	Daughters: pooled	Daughters: non-immi. ref.	Daughters: immi. ref.
Mean child income rank (Immigrant father)	53.9	53.9	53.9	47.06	47.06	47.06
	(0.254)	(0.254)	(0.254)	(0.249)	(0.249)	(0.249)
Mean child income rank (No immigrant father)	55.01	55.01	55.01	46.73	46.73	46.73
	(0.0287)	(0.0287)	(0.0287)	(0.0281)	(0.0281)	(0.0281)
Difference in means	-1.108	-1.108	-1.108	0.322	0.322	0.322
	(0.256)	(0.256)	(0.256)	(0.25)	(0.25)	(0.25)
Total explained difference	0.909	0.9	0.909	1.132	1.053	1.133
	(0.06)	(0.071)	(0.06)	(0.057)	(0.065)	(0.057)
Total unexplained difference	-2.016	-2.007	-2.017	-0.809	-0.73	-0.81
	(0.213)	(0.21)	(0.214)	(0.268)	(0.266)	(0.268)
Parental income rank (relative mobility)	-0.133	-0.124	-0.134	-1.055	-0.976	-1.056
	(0.5)	(0.465)	(0.501)	(0.442)	(0.409)	(0.442)
Intercept (absolute mobility)	-1.883	-1.883	-1.883	0.246	0.246	0.246
	(0.507)	(0.507)	(0.507)	(0.486)	(0.486)	(0.486)
Observations	992866	992866	992866	1049876	1049876	1049876

Notes: Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals. We estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1980-1990. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income in 1998-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

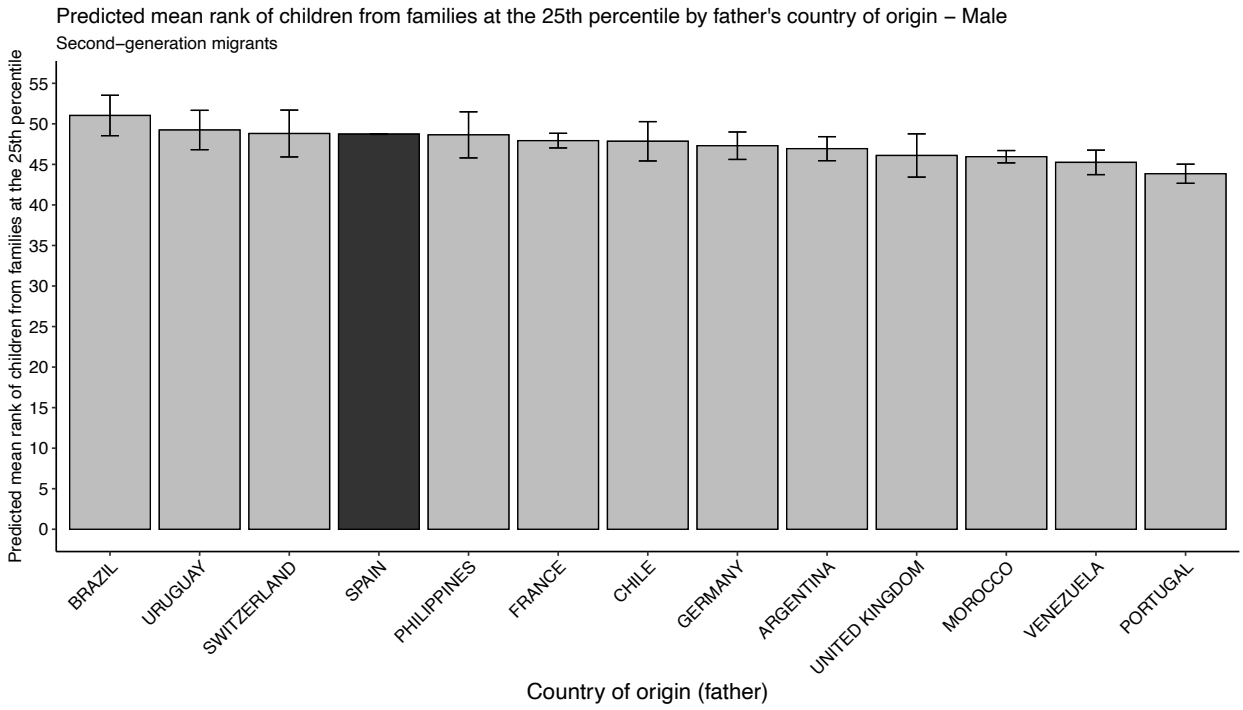
Table C.12.43: Income rank-rank intergenerational mobility estimates with various sets of controls (Spain)

	Dependent variable:					
	Mean Child Rank					
	Sons	Sons - Region FE	Sons - MUN FE	Daughters	Daughters - Region FE	Daughters - MUN FE
	(1)	(2)	(3)	(4)	(5)	(6)
Immigrant father = 1	−1.635***	−2.132***	−1.965***	0.415	−0.491	0.044
	(0.509)	(0.504)	(0.508)	(0.499)	(0.495)	(0.498)
Parents' Rank	0.228***	0.200***	0.216***	0.277***	0.246***	0.263***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Immigrant father = 1 × Parents' Rank	−0.005	0.005	−0.0002	−0.021***	−0.008	−0.016**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Intercept	43.00***	39.79***	41.37***	32.56***	28.70***	31.13**
	(0.058)	(0.008)	(0.074)	(0.609)	(0.071)	(0.577)
Observations	981,081	981,081	981,081	1,037,956	1,037,956	1,037,956
R^2	0.054	0.071	0.060	0.076	0.094	0.084

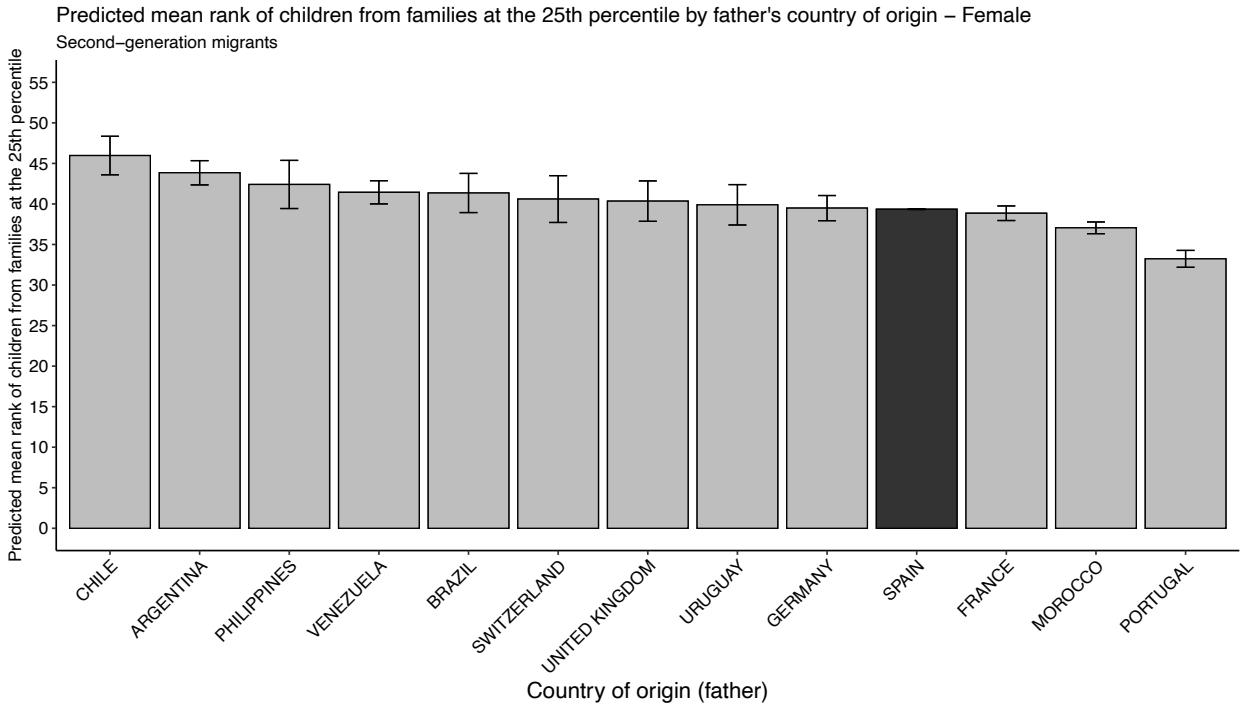
Notes: Estimates from a regression of the income ranks of sons/daughters on that of parents, with separate intercept and slope for children of immigrant parents and children of Spanish-born parents, with various sets of controls. Children born in 1980-1990. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income 1998-2000. Income ranks, 0-100, determined within cohorts. Columns (1) and (3) are baseline estimates without controls. Columns (2) and (4) include region fixed effects. Columns (3) and (6) include municipality fixed effects. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.12.51: Average income at 25th percentile, by country of origin (Spain)

(a) Sons



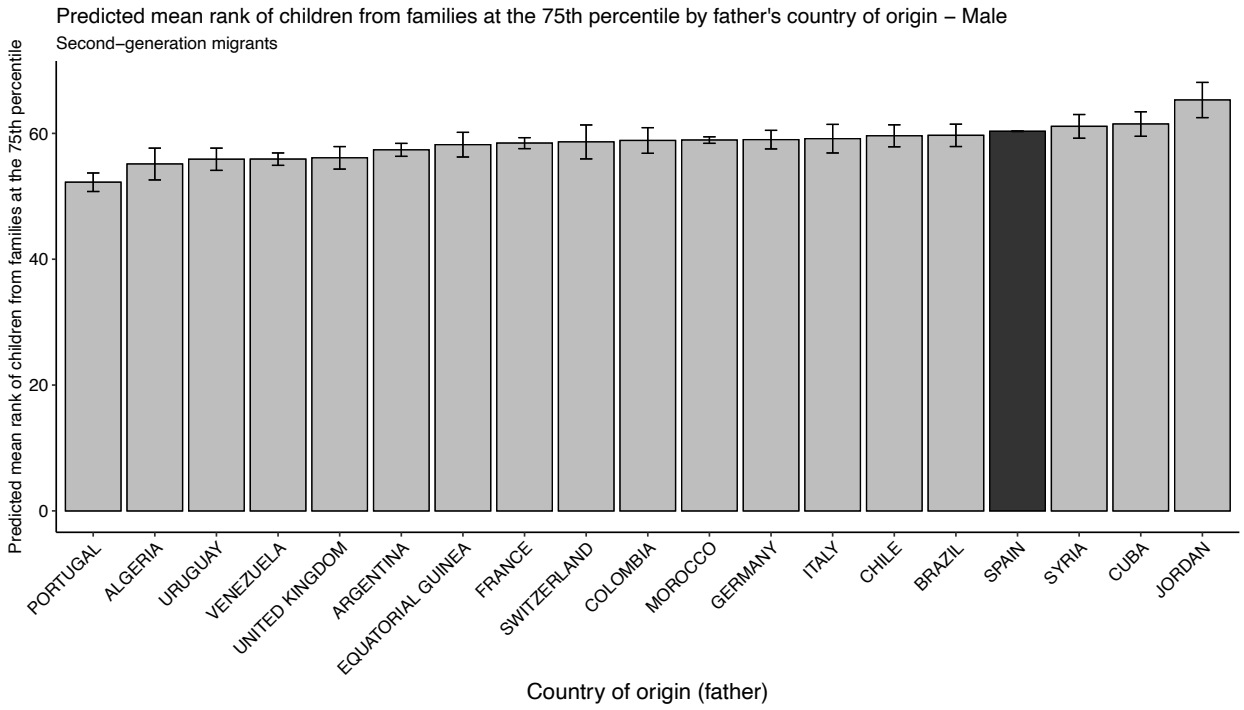
(b) Daughters



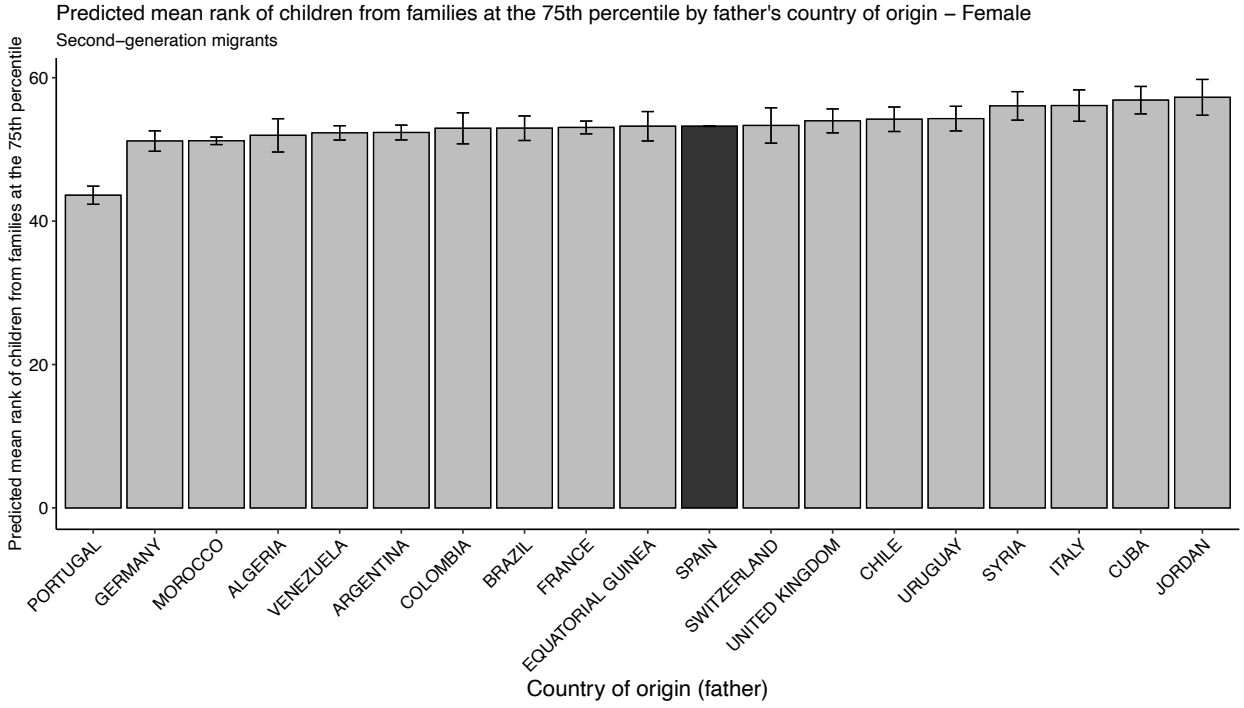
Notes: Predicted child income rank when parental income rank equals 25. Predictions from a regression of the income ranks of sons/daughters on that of parents, with country-specific intercept and slope for children of immigrant parents and children of Spanish-born. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income 1998-2000. Income ranks, 0-100, determined within cohorts.

Figure C.12.52: Average income at 75th percentile, by country of origin (Spain)

(a) Sons



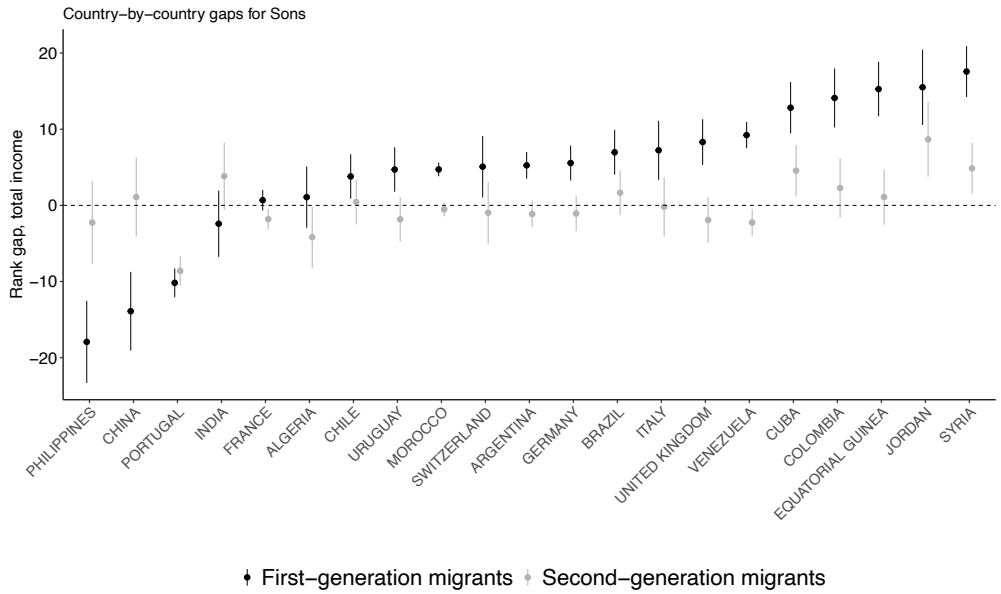
(b) Daughters



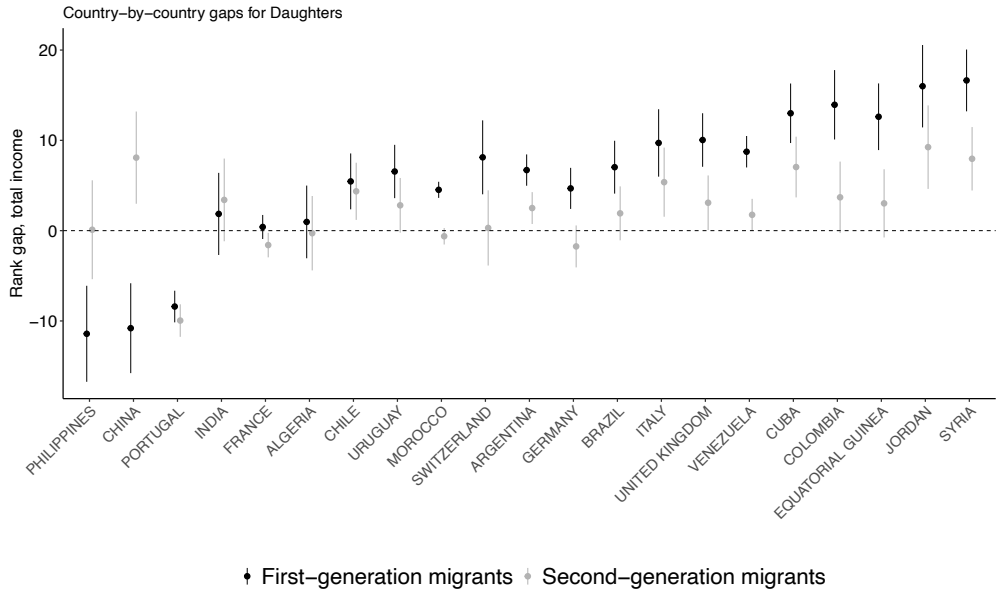
Notes: Predicted child income rank when parental income rank equals 75. Predictions from a regression of the income ranks of sons/daughters on that of parents, with country-specific intercept and slope for children of immigrant parents and children of Spanish-born. Immigration status is determined by father's country of birth. Child income measured in 2021-2022, and parental income 1998-2000. Income ranks, 0-100, determined within cohorts.

Figure C.12.53: First- and second-generation income gaps by parents' country of origin and children's gender (Spain)

(a) Sons

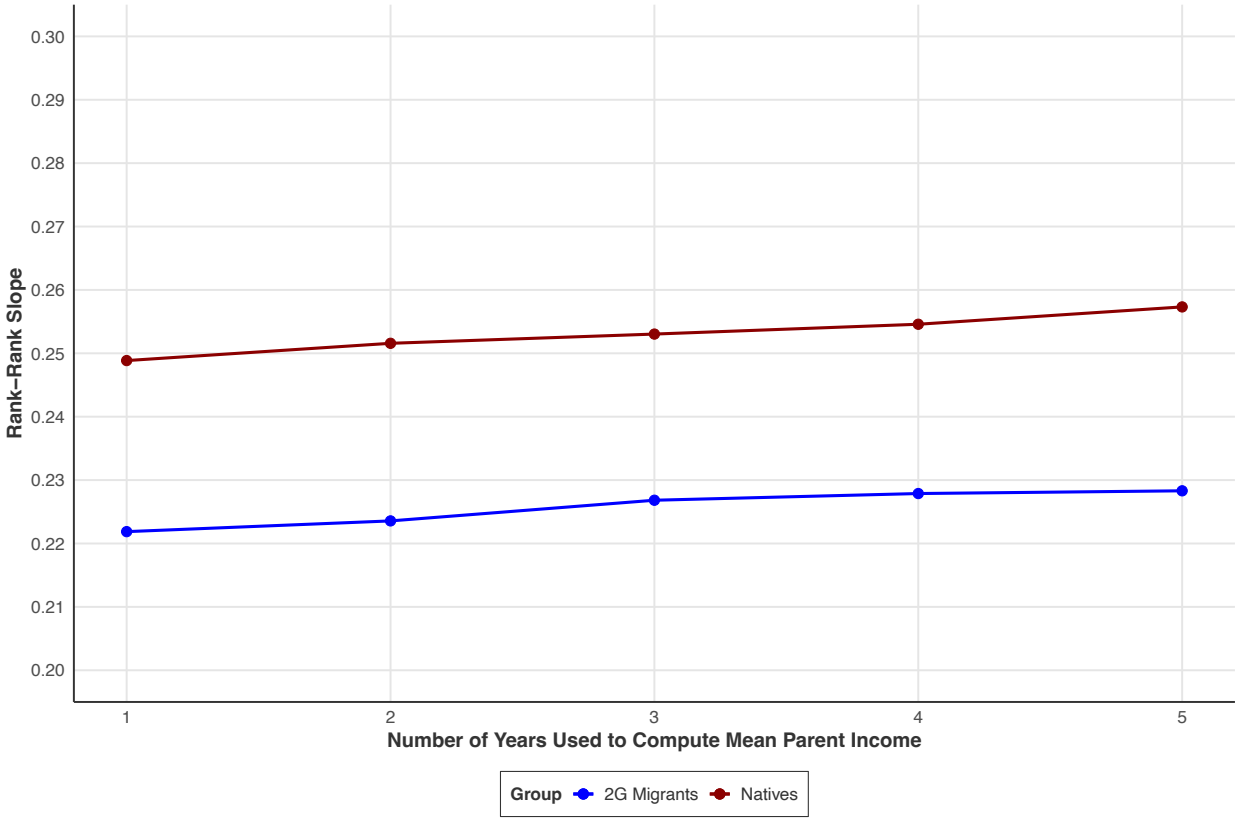


(b) Daughters



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for earnings of fathers and children measured in 1998-2000 an 2021-2022 respectively. Panel (a) reports the results for Sons, while Panel (b) reports the results for daughters. We report the results for the 10 countries that are the most common places of birth of fathers among second-generation immigrants. Immigration status is determined by father's country of birth. 95%-confidence interval indicated.

Figure C.12.54: Robustness: Rank-rank relationship, by number of years used to measure parental income



Notes: This figure illustrates how the precision of parental income measurement, based on the number of years used to compute mean parent income, impacts estimates of intergenerational mobility for children of Spanish-born (red) and children of immigrants (blue). The Rank-Rank Slope, shown on the y-axis, increases for both groups as the number of years (x-axis) rises from one to five, reflecting a reduction in measurement error. This trend indicates attenuation bias, whereby using fewer years to measure parental income underestimates the true slope due to transitory income fluctuations. However, the figure shows that slope variations are marginal. We use three years to measure parental income (the mid point in this figure). The persistent gap between the slopes for children of Spanish-born and children of immigrants highlights differences in intergenerational mobility between these groups, even as measurement precision improves.

C.13 Country-specific details & results: Switzerland

C.13.1 Data details and deviations

We rely on a number of administrative register datasets and census data supplied by the Federal Statistical Office of Switzerland (SFSO) to construct the relevant datasets on children and parents. Researchers are allowed to use these data subject to signing a data sharing agreement with the SFSO. Guidance on how to access the data are provided by the SFSO here: https://www.bfs.admin.ch/bfs/en/home/services/data-linkages/for-third-parties.html.

Annual Population Census (STATPOP). The STATPOP represents Switzerland's register-based annual population census, is available 2010–2021, and contains socio-demographic information on all permanent residents in Switzerland. We use this data to identify year and place of birth, legal gender, residence history at the municipality level, and parent-child linkages.
Unlike the Danish case, the data do not provide information on grades or college enrolment at age 25.

Parent-Child Linkage. We observe parent-child links if father or mother and the child are permanent residents in Switzerland in at least one year between 2003–2021 and if the child is permanent resident in at least one year 2010–2021. Parents and children are linked through their social security number. However, linkages might be missing if both parent and child have foreign citizenship, and if the parent never had any changes in the civil register between 1978 and 1989. One limitation of our data, therefore, is that parent-child linkages for children born 1978–1984 with migrant background are not fully captured unless the parents had a civil register entry from 1990 onward, which happens in case of marriage, divorce, widowhood, and birth of a child in Switzerland.

Social Security Earnings Records (SSER). This data contains individual's entire annual earnings history from employment and self-employment 1981–2021. These incomes are subject to contribution to the Old-Age and Survivors' Insurance (OASI). Contributing to the OASI is mandatory from age 20 onward, and contributions are uncapped. We use this data to measure labor earnings (adjusted for inflation with the 2022 CPI).
Unlike the Danish case, total income including capital gains is not available for Switzerland.

Population Censuses in 1990 and 2000 (SNC). We use data from the paper-based 1990 and 2000 decennial full population censuses to update our information about individuals' place of residence in the years prior to 2001.

C.13.1.1 Cross-sectional data

We use the STATPOP data to identify cohorts of interest, age, legal sex, and country of origin. Parental country of origin is not recorded directly in the data. We therefore extract this information for cohorts 1978-1982 exploiting the parent-child links in STATPOP.

The income measures for parents are total labor earnings in the years 1981–1983 according to the SSER. We restrict the sample to parents aged 30–50 in those years. Children's income represents labor earnings as measured in the SSER in the years 2010 and 2015.

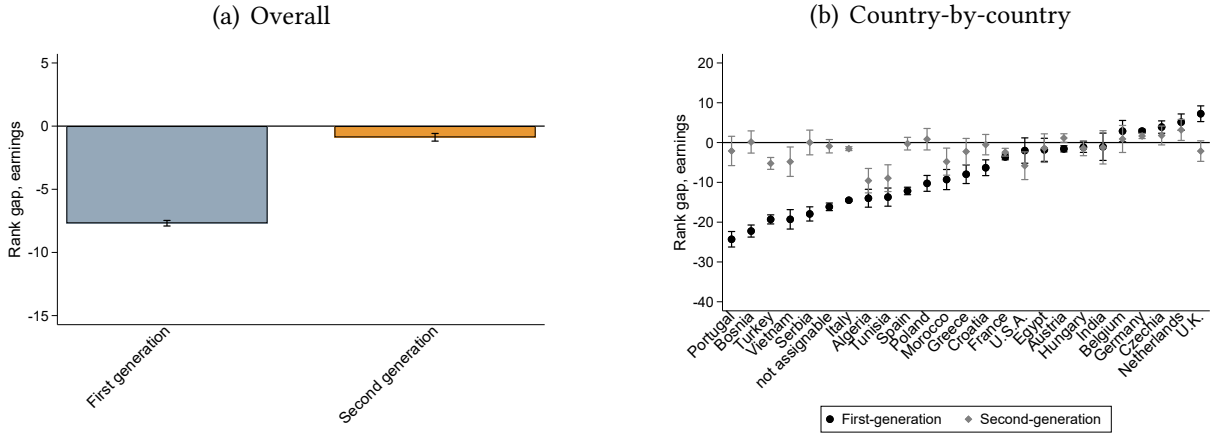
C.13.1.2 Linked data

The analysis is based on a person-level linkage between STATPOP and SSER. Parent-child relationships, countries of birth of fathers and children, as well as individuals' age and legal sex are obtained from STATPOP. Earnings of parents and children are labor earnings as measured in the SSER in the respective years (2014–2015 for children, 1994–2000 for parents in the main analysis). Information on the municipality of residence in years prior to 2001 stems from the decennial population censuses in 1990 and 2000. Because the censuses in 1990 and 2000 contain information on the municipality of residence in census year t and in $t-5$, we use parental residence location in 1995 instead of 1994.

Sample Selection. We include children for whom we find at least one parent in the data with parent-child linkages. This means that we could underestimate total parental income because we do not observe the other parent's income. This problem is mitigated by eliminating families with an income of zero. Income of the mother is missing in 6% of cases, that of fathers in 9% for the 1978-1982 cohort.

C.13.2 Cross-sectional results

Figure C.13.1: Cross-sectional results using labor earnings: Switzerland, 1981-2010 cohort



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the labor earnings of fathers and sons in 1981 and 2010, respectively, but, in panel (a), with a non-Swiss dummy rather than country dummies. We use measures of labor earnings for both generations. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. Sample includes men aged 30-50. 95%-confidence interval indicated.

Table C.13.1: Cross-sectional data: Summary statistics, Switzerland

Fathers: 1981 cohort

	Immigrants	Swiss-born	Diff.	Std. Error
Age	38.186	37.536	-0.650***	0.025
Rank gap, earnings	43.316	51.002	7.687***	0.114
ln(earnings)	10.623	10.692	0.070***	0.003
Earnings > 0	0.931	0.955	0.024***	0.001
Share of population	0.130	0.870		
N	73606	490845		

Sons: 2010 cohort

	Immigrant father	Swiss-born father	Diff.	Std. Error
Age	35.539	35.903	0.364***	0.037
Rank gap, earnings	49.203	50.088	0.885***	0.148
ln(earnings)	11.145	11.179	0.033***	0.004
Earnings > 0	0.936	0.955	0.020***	0.001
Share of population	0.099	0.901		
N	42128	381555		

Notes: This table reports summary statistics of the cross-sectional sample of Switzerland, including sons and fathers in 1981 and 2010 respectively. Earnings are only labor earnings. Immigration status is determined by father's country of birth. Labor income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.13.3 Main results

C.13.3.1 Summary statistics

Table C.13.2: Linked data: Summary statistics, Switzerland

Sons

	Immigrant father	Swiss-born father	Diff.	Std. Error
Child age	32.380	32.430	0.050***	0.014
Child labor income rank	59.304	62.157	2.853***	0.218
Child labor force part.	0.932	0.961	0.029***	0.002
Mother's age at child birth	28.142	27.816	-0.326***	0.038
Father's age at child birth	31.574	30.575	-0.999***	0.041
Parental labor income rank	47.555	50.258	2.703***	0.239
Child share of population	0.105	0.895		
N	16202	138336		

Daughters

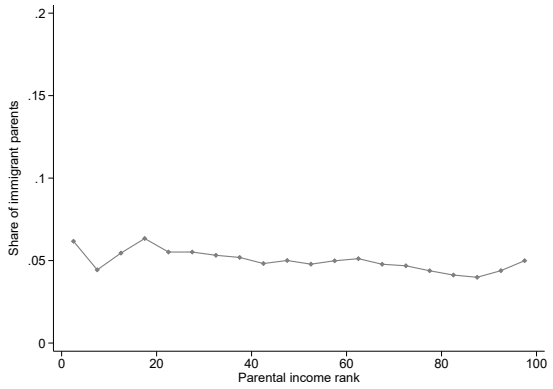
	Immigrant father	Swiss-born father	Diff.	Std. Error
Child age	32.370	32.438	0.068***	0.014
Child labor income rank	40.442	37.303	-3.139***	0.219
Child labor force part.	0.888	0.892	0.004	0.002
Mother's age at child birth	28.162	27.798	-0.364***	0.039
Father's age at child birth	31.533	30.580	-0.953***	0.042
Parental labor income rank	47.441	50.338	2.897***	0.242
Child share of population	0.108	0.892		
N	15970	132303		

Notes: This table reports summary statistics of the estimation sample. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Child age is measured in 2014. Income ranks, 0-100, determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

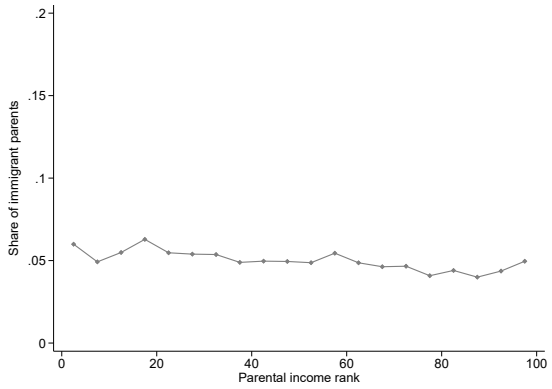
C.13.3.2 Parental income distribution

Figure C.13.2: Linked data: Switzerland, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

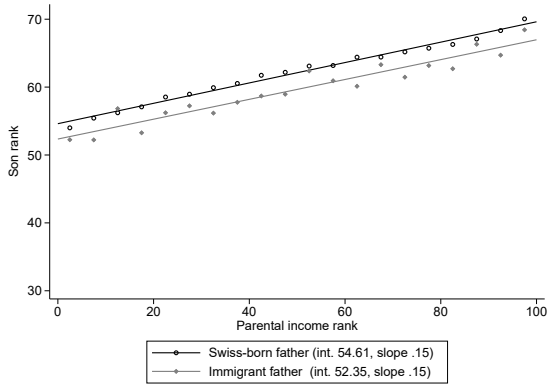


Notes: This figure shows the share of children of immigrant parents in each ventile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each ventile. The denominator is the total number of children with immigrant parents (across all ventiles). Children born in 1978-1983. Immigration status is determined by father's country of birth. Parental income measured in 1994-2000. Income ranks, 0-100, determined within child cohorts.

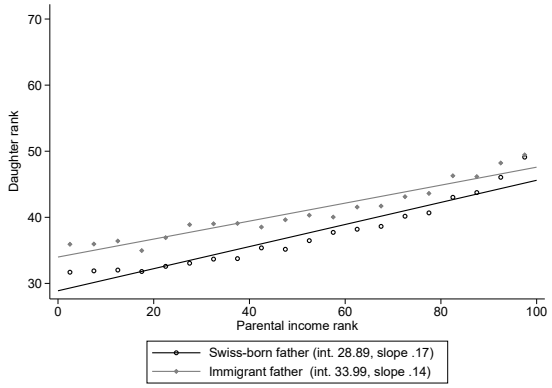
C.13.3.3 Rank-rank relationship

Figure C.13.3: Linked data: Intergenerational mobility, Switzerland

(a) Switzerland, sons



(b) Switzerland, daughters



Notes: This figure plots estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Table C.13.3: Linked data: Intergenerational mobility estimates, Switzerland

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-2.264***	5.102***
	(0.456)	(0.422)
Parents' rank	0.150***	0.167***
	(0.00246)	(0.00247)
Immigrant father # rank	-0.00387	-0.0312***
	(0.00833)	(0.00789)
Constant	54.61***	28.89***
	(0.138)	(0.136)
Observations	154,538	148,273
R-squared	0.028	0.034

Notes: This table reports estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.13.3.4 Oaxaca-Blinder decomposition

Table C.13.4: Oaxaca-Blinder decompositions, child income rank, Switzerland

	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	59.30***	59.30***	59.30***	40.44***	40.44***	40.44***
	(0.225)	(0.225)	(0.225)	(0.214)	(0.214)	(0.214)
No immigrant father	62.16***	62.16***	62.16***	37.30***	37.30***	37.30***
	(0.0699)	(0.0699)	(0.0699)	(0.0714)	(0.0714)	(0.0714)
Difference	−2.853***	−2.853***	−2.853***	3.139***	3.139***	3.139***
	(0.235)	(0.235)	(0.235)	(0.226)	(0.226)	(0.226)
Total explained	−0.405***	−0.406***	−0.395***	−0.475***	−0.484***	−0.394***
	(0.0364)	(0.0365)	(0.0411)	(0.0402)	(0.0411)	(0.0394)
Total unexplained	−2.449***	−2.447***	−2.458***	3.613***	3.623***	3.533***
	(0.233)	(0.233)	(0.234)	(0.223)	(0.223)	(0.226)
- Parental income rank	−0.185	−0.184	−0.194	−1.489***	−1.479***	−1.570***
	(0.399)	(0.396)	(0.419)	(0.377)	(0.374)	(0.397)
- Constant	−2.264***	−2.264***	−2.264***	5.102***	5.102***	5.102***
	(0.456)	(0.456)	(0.456)	(0.422)	(0.422)	(0.422)
Observations	154,538	154,538	154,538	148,273	148,273	148,273

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in labor income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.13.4 Mechanisms

C.13.4.1 Various sets of controls

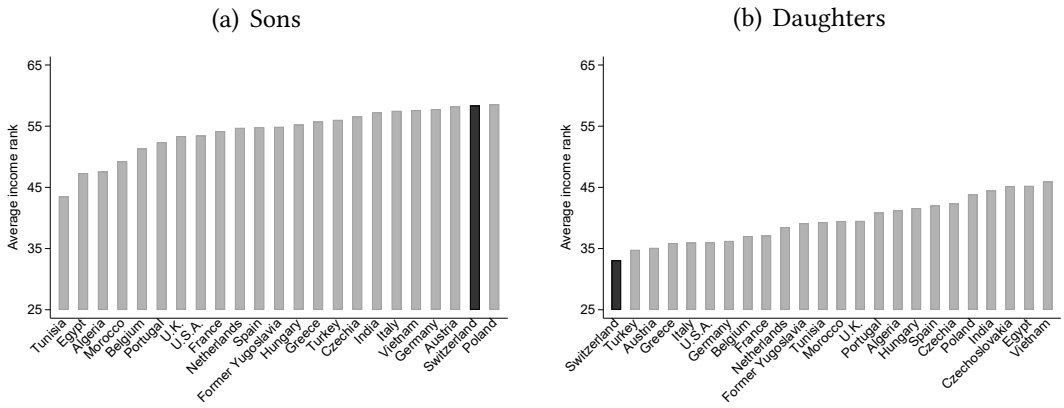
Table C.13.5: Linked data: Intergenerational mobility estimates with various sets of controls, Switzerland

VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Daughters	(5) Daughters	(6) Daughters
Immigrant father = 1	-2.264***	-1.485***	-0.349	5.102***	4.771***	3.696***
	(0.456)	(0.457)	(0.469)	(0.422)	(0.425)	(0.437)
Parents' rank	0.150***	0.148***	0.152***	0.167***	0.162***	0.147***
	(0.00246)	(0.00250)	(0.00266)	(0.00247)	(0.00252)	(0.00267)
Immigrant father # rank	-0.00387	-0.00776	-0.0120	-0.0312***	-0.0320***	-0.0254***
	(0.00833)	(0.00832)	(0.00847)	(0.00789)	(0.00788)	(0.00802)
Constant	54.61***	52.26***	57.46***	28.89***	31.75***	37.77***
	(0.138)	(0.232)	(3.537)	(0.136)	(0.225)	(4.434)
Observations	154,538	154,538	154,068	148,273	148,273	147,844
R-squared	0.028	0.034	0.059	0.034	0.037	0.061
Parental region	0	1	0	0	1	0
Parental municipality	0	0	1	0	0	1

Notes: This table reports estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Parental region and municipality of residence are determined in 1995 and included as fixed effects. We have 7 regions and 2,872 municipalities. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

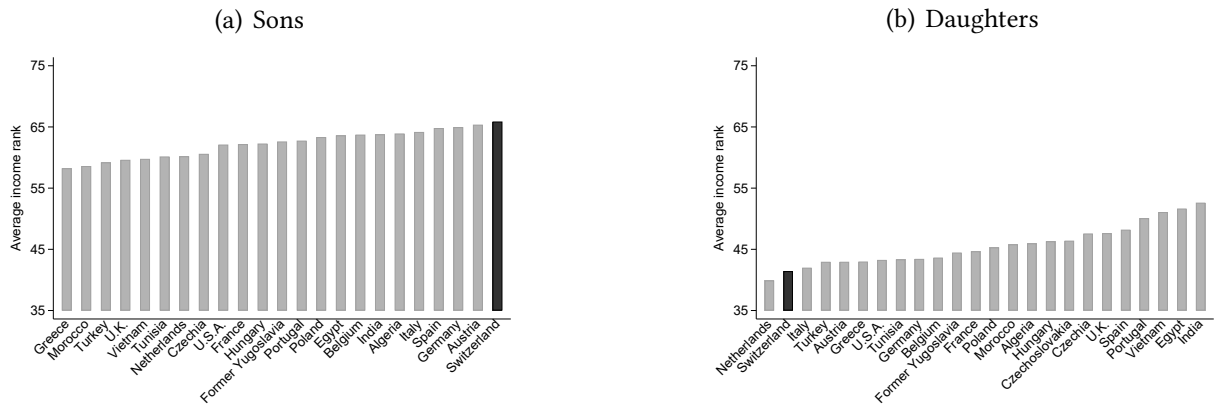
C.13.4.2 Heterogeneity across sending countries

Figure C.13.4: Average income at 25th percentile: Switzerland



Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Country of birth assigned according to historical borders. All countries that once belonged to Yugoslavia, are grouped into Former Yugoslavia. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

Figure C.13.5: Average income at 75th percentile: Switzerland



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Country of birth assigned according to historical borders. All countries that once belonged to Yugoslavia, are grouped into Former Yugoslavia. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.13.4.3 Employment

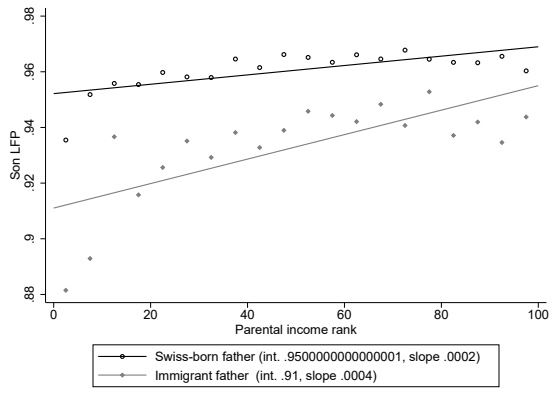
Table C.13.6: Linked data: Intergenerational mobility estimates, employment, Switzerland

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0411***	0.00198
	(0.00410)	(0.00513)
Parents' rank	0.000168***	0.000815***
	(1.77e-05)	(2.77e-05)
Immigrant father # rank	0.000271***	-7.56e-05
	(6.95e-05)	(8.60e-05)
Constant	0.952***	0.850***
	(0.00107)	(0.00174)
Observations	154,538	148,273
R-squared	0.003	0.006

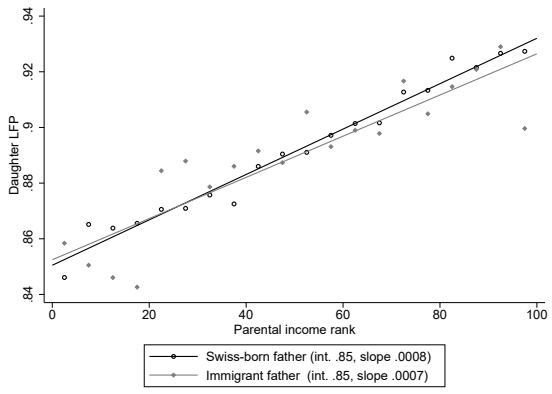
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on labor income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.13.6: Linked data: Intergenerational mobility, employment, Switzerland

(a) Switzerland, sons



(b) Switzerland, daughters



Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on labor income ranks of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child employment measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts.

C.13.4.4 Educational mobility

Unlike the Danish case, no information on grades or college enrollment status at age 25 is available in the Swiss data.

C.13.5 Robustness

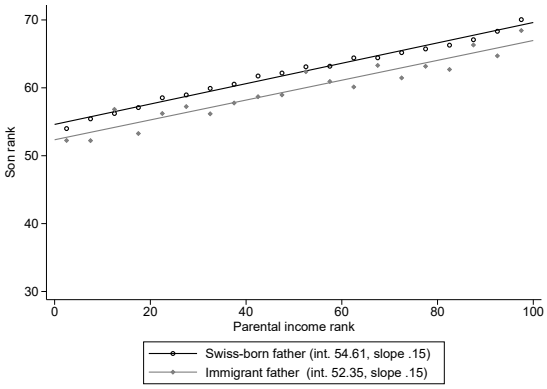
C.13.5.1 Emigration

The Swiss data does not include information on return migration, and before 2010, we do not have the yearly universe of residents (only the universe of workers). We can therefore not compute return-migration from age 14 onward.

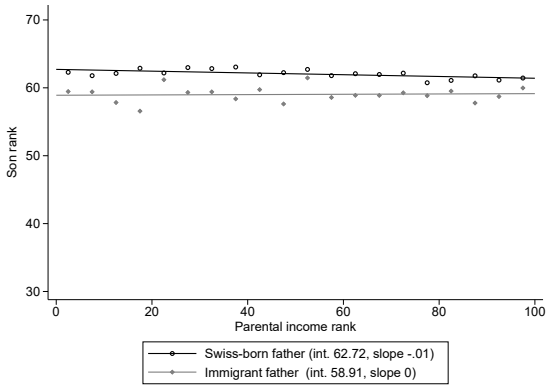
C.13.5.2 Additional years of parental income data

Figure C.13.7: Intergenerational mobility: Switzerland by number of years of parental income data

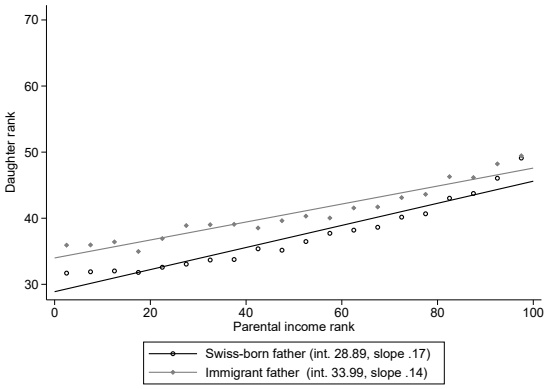
(a) Sons, parental income 1994-2000



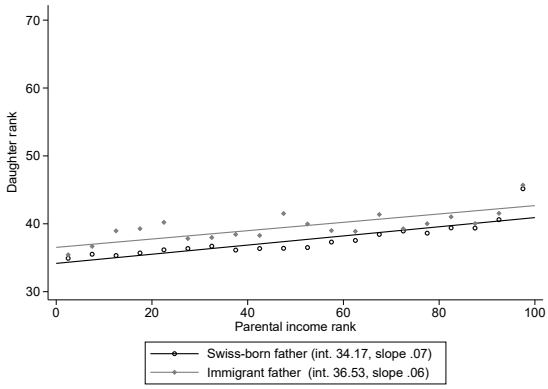
(b) Sons, parental income 1981-2000



(c) Daughters, parental income 1994-2000



(d) Daughters, parental income 1981-2000



Notes: This figure plots estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000 and 1981-2000 respectively. Income ranks, 0-100, determined within cohorts.

Table C.13.7: Intergenerational mobility estimates: Switzerland, parental income 1981-2000

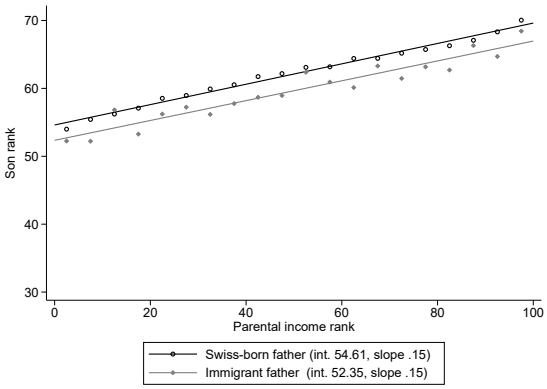
VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-3.810***	2.358***
	(0.580)	(0.554)
Parents' rank	-0.0131***	0.0675***
	(0.00271)	(0.00274)
Immigrant father # rank	0.0154*	-0.00592
	(0.00871)	(0.00828)
Constant	62.72***	34.17***
	(0.149)	(0.152)
Observations	132,007	126,779
R-squared	0.001	0.007

Notes: This table reports estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1981-2000 respectively. Income ranks, 0-100, determined within cohorts. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

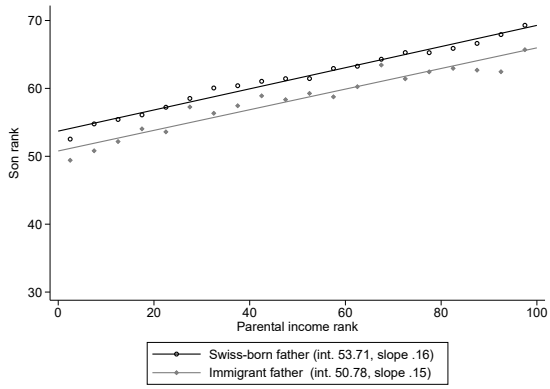
C.13.5.3 More recent birth cohorts, income rank

Figure C.13.8: Linked data: Intergenerational mobility, Switzerland, comparison across cohorts

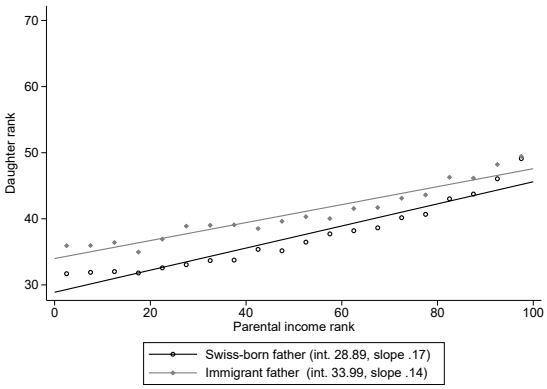
(a) Switzerland, sons, born 1978-1983



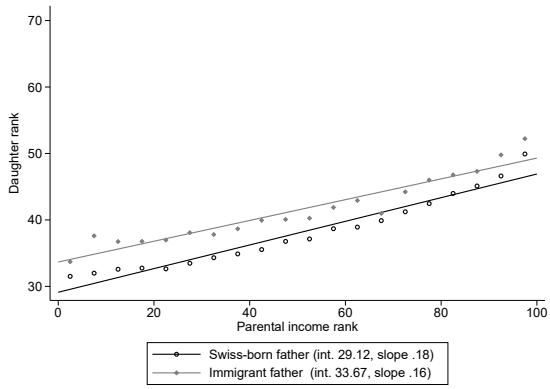
(b) Switzerland, sons, born 1982-1987



(c) Switzerland, daughters, born 1978-1983



(d) Switzerland, daughters, born 1982-1987



Notes: This figure plots estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Children born in 1978-1983 and 1982-1987 respectively. Immigration status is determined by father's country of birth. Child income measured in 2014-2015 and 2018-2019, and parental income 1994-2000 and 1998-2004 respectively. Income ranks, 0-100, determined within cohorts.

Table C.13.8: Linked data: Intergenerational mobility estimates, Switzerland, comparing cohorts

	(1)	(2)	(4)	(6)
	Sons	Daughters	Sons	Daughters
VARIABLES	1978-1983	1978-1983	1982-1987	1982-1987
Immigrant father = 1	-2.264***	5.102***	-2.924***	4.548***
	(0.456)	(0.422)	(0.409)	(0.374)
Parents' rank	0.150***	0.167***	0.156***	0.178***
	(0.00246)	(0.00247)	(0.00242)	(0.00238)
Immigrant father # rank	-0.00387	-0.0312***	-0.00381	-0.0215***
	(0.00833)	(0.00789)	(0.00756)	(0.00711)
Constant	54.61***	28.89***	53.71***	29.12***
	(0.138)	(0.136)	(0.137)	(0.132)
Observations	154,538	148,273	170,348	163,969
R-squared	0.028	0.034	0.030	0.038

Notes: This table reports estimates of Specification 1, regressing the labor income ranks of sons/daughters on that of parents. Immigration status is determined by father's country of birth. Income ranks, 0-100, determined within cohorts. Columns (1) & (2): Children born in 1978-1983, child income measured in 2014-2015, and parental income 1994-2000. Columns (3) & (4): Children born in 1982-1987, child income measured in 2018-2019, and parental income 1998-2004. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.14 Country-specific details & results: United Kingdom

C.14.1 Data details and deviations

Two different survey studies are used for the cross-sectional and linked analyses due to the unavailability of a linked administrative dataset for the UK. For the cross-sectional analysis, we use the General Household Survey (GHS), and for the linked parent-child analysis, we use the 1970 British Cohort Study (BCS70).

GHS. The GHS was a repeated cross-sectional study conducted continuously from 1971 to 2007 on private households in the UK by the Office for National Statistics (ONS). Its primary purpose was to collect data on the demographic, economic, and social characteristics of private households. In the 2006 survey, a sample of 9,731 households was interviewed. Individual questionnaires, completed by all adults aged 16 and over residing in a household, collected information on earnings, income, as well as the country of origin of respondents and their parents.

BCS70. The BCS70 is a longitudinal birth cohort study that follows a nationally representative sample of over 17,000 individuals born in England, Scotland, and Wales during a single week in 1970. Since 1970, cohort members have been surveyed throughout their childhood and adult lives on a range of topics, including their own and their parents' migration background, employment, earnings, and income.

Data access. Both studies are accessible through the UK Data Service (UKDS): https://ukdataservice.ac.uk/. We use the safeguarded versions of the datasets, which can be downloaded by registering and accepting the UK Data Service End User Licence Agreement. Further details on safeguarded access can be found here: https://ukdataservice.ac.uk/find-data/access-conditions/safeguarded-access/.

C.14.1.1 Cross-sectional data

First-generation sample. We use 1980 data from the GHS to identify fathers aged 30 to 50 with at least one child in the household, as well as available immigration status and income data. Since we rely on household survey data, we do not have information on children who do not reside in the same household as their fathers.

Following the Danish case, immigration status is determined based on place of birth. However, the GHS provides specific country-of-birth information for only four countries: the UK, Ireland, India, and Pakistan. For individuals born in other countries, the data includes only broader country groupings, which aligns with the birth information available in the linked datasets we used. Consequently, we compare income-rank gaps across immigrant groups (Ireland, Europe, Africa, Southern Asia, the Caribbean, and others) rather than specific top-sending countries. For income, we use the self-reported individual gross total income .We assign a value of zero for missing income data.

Second-generation sample.We use data from 2006 instead of 2010 because the GHS was replaced by the General Lifestyle Survey (GLS) in 2007, and accessing the latter requires controlled data application. Using the 2006 GHS data, we identify sons aged 30 to 50 who were born in the UK and have available income data and information on their fathers' immigration status.

A father's immigration status is determined based on place of birth. Unlike the 1980 data, the 2006 data provides specific country-of-birth information for both fathers and sons. However,

to maintain consistency with the first-generation sample and the linked data, we still compare income-rank gaps across immigrant groups rather than individual countries.

The income measure is similar to that used for the first-generation sample, with one difference: the 2006 measure is recorded in pence instead of pounds. Accordingly, we convert the measure to pounds and code missing values as zeros.

C.14.1.2 Linked data

Unlike the Danish study, which focuses on birth cohorts from 1978 to 1983, we focus on the 1970 birth cohort. Immigrant status is determined by the birth father's place of birth. In the BCS70, we only have information on parental regions rather than separate regions for the father and mother, and parental wealth data is unavailable.

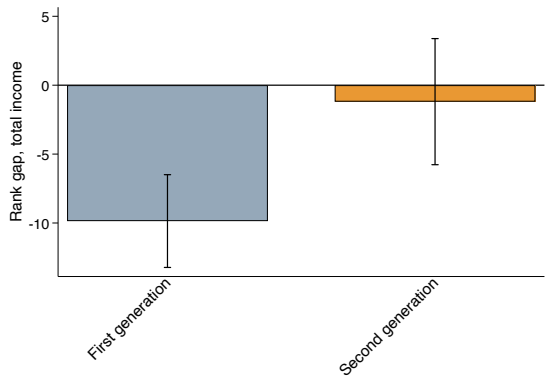
Parental income is measured in 1980 and 1986, corresponding to child ages 10 and 16. The income data is banded and self-reported, capturing all earned and unearned income of both parents before deductions for tax, national insurance, and other contributions. It excludes income from other household members and child benefits. We convert the banded income into continuous income using interval regression. Since missing values in the self-reported income data do not necessarily indicate zero income, we exclude cases where parental income is missing for both 1980 and 1986. For cases with income missing in one year, we impute the missing value using the available income from the other year, adjusted for inflation, to maximize the sample size.

Child income is measured in 2000, when the child is aged 30. We construct a total income variable that includes labor income, self-employment income, net profits, investment income, benefits and allowances, and other income types, excluding cash transfers from relatives and insurance payouts. Due to the sensitivity of our results to missing values, we exclude individuals who are employed but lack labor income data, self-employed but lack self-employment income data, or unemployed but lack data on main benefits.

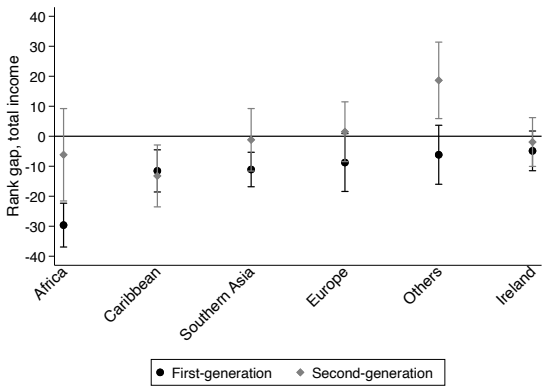
C.14.2 Cross-sectional results

Figure C.14.1: Cross-sectional results: UK, 1980-2006 cohort

(a) Overall



(b) Country-by-country



Notes: This figure plots the estimated coefficients from Equation 1 from Abramitzky et al. (2021) for the income and earnings of sons and fathers in 1980 and 2006 respectively, using a non-UK dummy rather than country-specific dummies. Immigration status is determined by father's country of birth. We control for age-fixed effects. 95%-confidence interval indicated.

Table C.14.1: Cross-sectional data: Summary statistics, UK

Fathers: 1980 cohort

	Immigrants	UK-born	Diff.	Std. Error
Age	40.068	39.511	-0.557	0.389
Rank gap, total income	40.940	50.800	9.860***	1.911
ln(total income)	8.517	8.632	0.115*	0.062
Total income > 0	0.831	0.860	0.028	0.023
Share of population	0.081	0.919		
N	249	2819		

Sons: 2006 cohort

	Immigrant father	UK-born father	Diff.	Std. Error
Age	39.741	40.254	0.514	0.439
Rank gap, total income	48.884	50.079	1.195	2.187
ln(total income)	10.048	10.042	-0.006	0.083
Total income > 0	0.852	0.877	0.025	0.025
Share of population	0.066	0.934		
N	189	2669		

Notes: This table reports summary statistics of the cross-sectional sample, including sons and fathers in 1980 and 2006 respectively. Immigration status is determined by father's country of birth. Income ranks are determined within cohorts. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.14.3 Main results

C.14.3.1 Summary statistics

Table C.14.2: Linked data: Summary statistics, UK

Sons

	Immigrant father	UK-born father	Diff.	Std. Error
Child income rank	62.304	57.760	-4.545***	1.734
Child labour force part.	0.810	0.843	0.033	0.023
Mother's age at child birth	27.038	25.901	-1.137***	0.338
Father's age at child birth	31.984	28.693	-3.291***	0.474
Parental income rank	45.201	50.095	4.894***	1.843
Child share of population	0.069	0.931		
N	263	3564		

Daughters

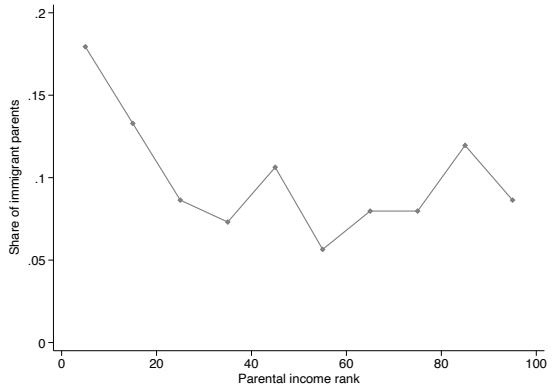
	Immigrant father	UK-born father	Diff.	Std. Error
Child income rank	47.614	40.013	-7.601***	1.859
Child labour force part.	0.893	0.911	0.018	0.019
Mother's age at child birth	26.807	26.096	-0.711**	0.351
Father's age at child birth	31.080	28.762	-2.318***	0.493
Parental income rank	45.688	50.649	4.962***	1.912
Child share of population	0.074	0.926		
N	243	3035		

Notes: This table reports summary statistics of the estimation sample. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

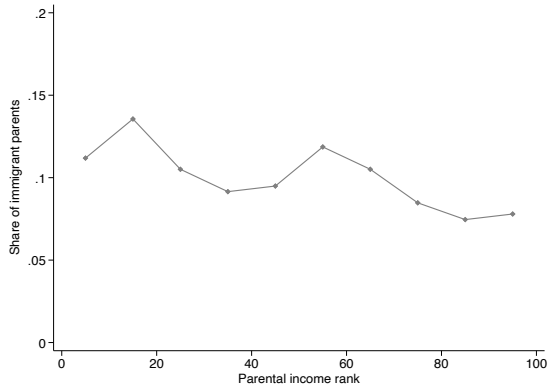
C.14.3.2 Parental income distribution

Figure C.14.2: Linked data: UK, share of total number of children with immigrants parents

(a) Sons



(b) Daughters

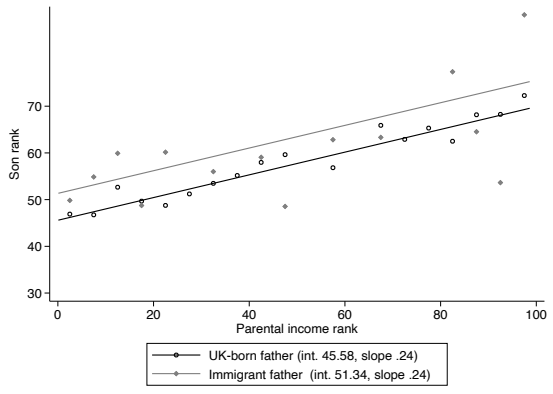


Notes: This figure shows the share of children of immigrant parents in each decile out of the total number of children with immigrant parents. The numerator is the number of children of immigrants within each decile. The denominator is the total number of children with immigrant parents (across all deciles). Immigration status is determined by father's country of origin. Income ranks, 0-100. Due to sample size limitations, we do this graph for deciles instead of ventiles in the UK case.

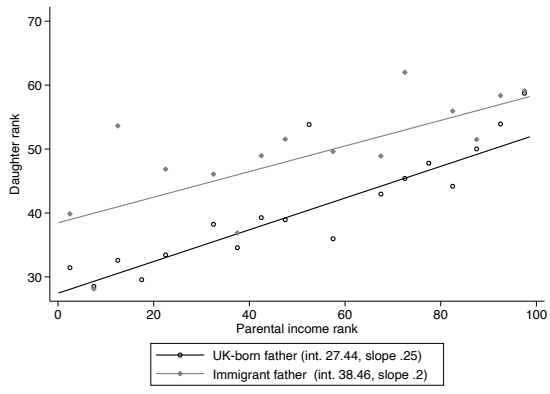
C.14.3.3 Rank-rank relationship

Figure C.14.3: Linked data: Intergenerational mobility, UK

(a) UK, sons



(b) UK, daughters



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100, determined within cohorts.

Table C.14.3: Linked data: Intergenerational mobility estimates, UK

	(1)	(2)
	Sons	Daughters
VARIABLES	1970	1970
Immigrant father = 1	5.757*	11.02***
	(3.123)	(3.248)
Parents' rank	0.243***	0.248***
	(0.0155)	(0.0172)
Immigrant father # rank	-0.000499	-0.0478
	(0.0542)	(0.0612)
Constant	45.58***	27.44***
	(0.905)	(0.933)
Observations	3,827	3,278
R-squared	0.068	0.068

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Robust standard errors in parentheses, *** *p<0.01*, ** *p<0.05*, * *p<0.1*
.

C.14.3.4 Oaxaca-Blinder decomposition

Table C.14.4: Oaxaca-Blinder decompositions, child income rank, UK

	(1) Sons: pooled	(2) Sons: non-immi. ref.	(3) Sons: . immi. ref	(4) Daughters: pooled	(5) Daughters: non-immi. ref.	(6) Daughters:. immi. ref
Mean child income rank: Immigrant father	62.30***	62.30***	62.30***	47.61***	47.61***	47.61***
	(1.728)	(1.734)	(1.734)	(1.715)	(1.722)	(1.722)
Mean child income rank: No immigrant father	57.76***	57.76***	57.76***	40.01***	40.01***	40.01***
	(0.453)	(0.453)	(0.453)	(0.508)	(0.508)	(0.508)
Difference in means	4.545**	4.545**	4.545**	7.601***	7.601***	7.601***
	(1.786)	(1.792)	(1.792)	(1.789)	(1.795)	(1.795)
Total explained difference	−1.190**	−1.190**	−1.187**	−1.214**	−1.231**	−0.994**
due to differences in parental income distributions	(0.485)	(0.486)	(0.542)	(0.472)	(0.480)	(0.480)
Total unexplained difference	5.734***	5.735***	5.732***	8.815***	8.832***	8.595***
due to differences in mobility parameters	(1.721)	(1.729)	(1.725)	(1.747)	(1.753)	(1.788)
- Parental income rank (*relative mobility*)	−0.0228	−0.0226	−0.0250	−2.202	−2.185	−2.422
	(2.469)	(2.456)	(2.722)	(2.819)	(2.808)	(3.111)
- Intercept (*absolute mobility*)	5.757*	5.757*	5.757*	11.02***	11.02***	11.02***
	(3.122)	(3.132)	(3.132)	(3.246)	(3.258)	(3.258)
Observations	3,827	3,827	3,827	3,278	3,278	3,278

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.14.4 Mechanisms

C.14.4.1 Various sets of controls

Table C.14.5: Linked data: Intergenerational mobility estimates with various sets of controls, UK

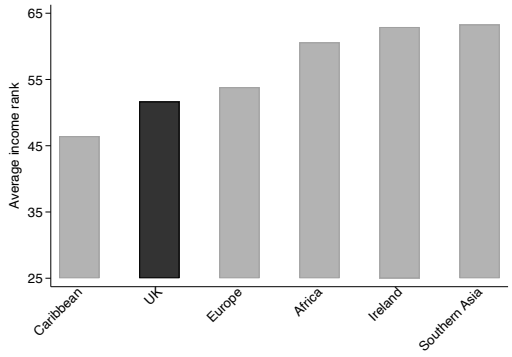
VARIABLES	(1) Sons	(2) Sons	(3) Sons	(4) Sons	(5) Daughters	(6) Daughters	(7) Daughters	(8) Daughters
Immigrant father = 1	5.757*	4.318	4.907	3.311	11.02***	9.703***	10.51***	9.192**
	(3.123)	(3.129)	(3.443)	(3.448)	(3.248)	(3.249)	(3.851)	(3.877)
Parents' rank	0.243***	0.219***	0.230***	0.209***	0.248***	0.236***	0.216***	0.204***
	(0.0155)	(0.0159)	(0.0190)	(0.0193)	(0.0172)	(0.0175)	(0.0214)	(0.0217)
Immigrant father # rank	-0.000499	-0.00404	-0.00859	-0.00646	-0.0478	-0.0415	-0.0255	-0.0189
	(0.0542)	(0.0543)	(0.0616)	(0.0614)	(0.0612)	(0.0612)	(0.0703)	(0.0699)
Constant	45.58***	42.18***	73.66***	72.82***	27.44***	26.24***	21.51***	21.25***
	(0.905)	(1.798)	(5.099)	(6.178)	(0.933)	(1.926)	(5.131)	(5.494)
Observations	3,827	3,827	3,827	3,827	3,278	3,278	3,278	3,278
R-squared	0.068	0.084	0.212	0.224	0.068	0.077	0.226	0.232
Parental region	0	1	0	1	0	1	0	1
Parental industry	0	0	1	1	0	0	1	1

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100. Other parental characteristics are all determined in 1980 and included as fixed effects. We have 10 regions. Parental industries include categories for unknown industry as well as no industry (if not working). Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

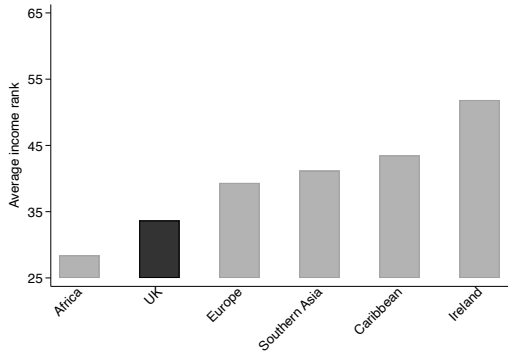
C.14.4.2 Heterogeneity across sending countries

Figure C.14.4: Average income at 25th percentile: UK

(a) Sons



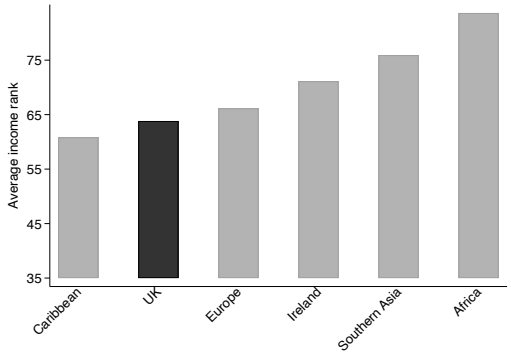
(b) Daughters



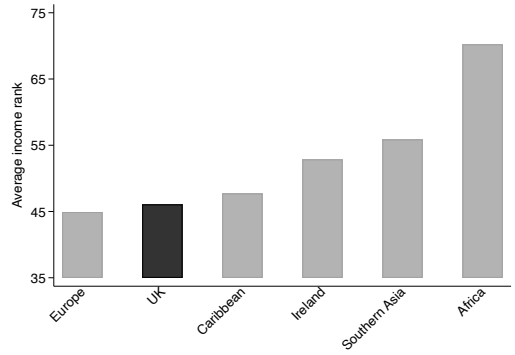
Notes: This figure plots the predicted child income rank if parental income rank equals 25 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100.

Figure C.14.5: Average income at 75th percentile: UK

(a) Sons



(b) Daughters



Notes: This figure plots the predicted child income rank if parental income rank equals 75 from a paternal country of origin-level estimation of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100.

C.14.4.3 Employment

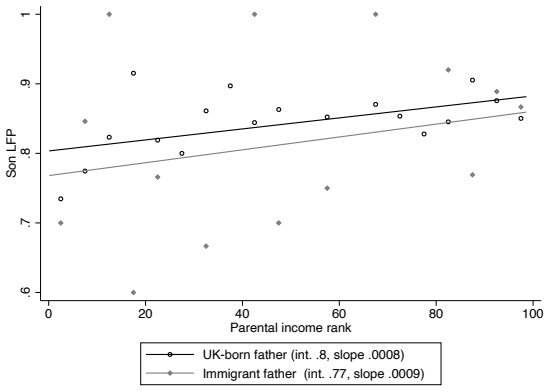
Table C.14.6: Linked data: Intergenerational mobility estimates, employment, UK

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	-0.0354	0.0360
	(0.0458)	(0.0417)
Parents' rank	0.000792***	0.000440**
	(0.000219)	(0.000191)
Immigrant father # rank	0.000134	-0.00114
	(0.000777)	(0.000841)
Constant	0.804***	0.889***
	(0.0131)	(0.0115)
Observations	3,827	3,278
R-squared	0.005	0.002

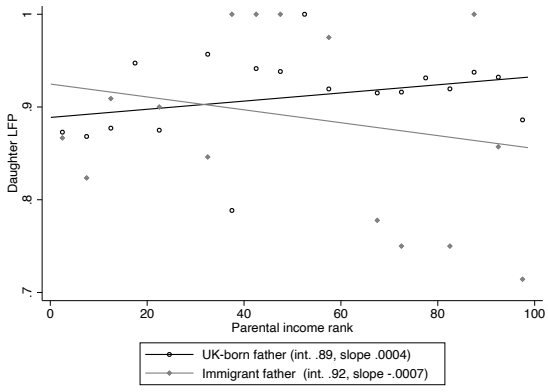
Notes: This table reports estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child employment measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure C.14.6: Linked data: Intergenerational mobility, employment, UK

(a) UK, sons



(b) UK, daughters



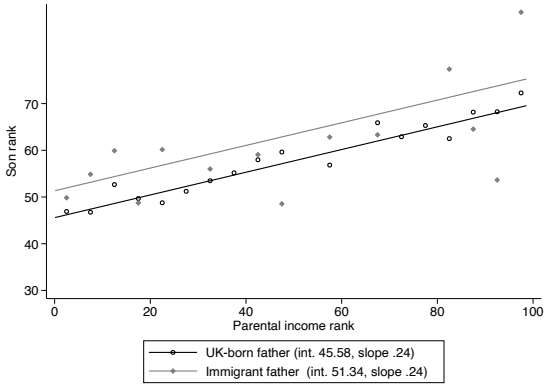
Notes: This figure plots estimates of Specification 1, regressing employment of sons/daughters on income ranks of parents.Children born in 1970. Immigration status is determined by father's country of birth. Child employment measured in 2000, and parental income in 1980 and 1986. Income ranks, 0-100.

C.14.5 Robustness

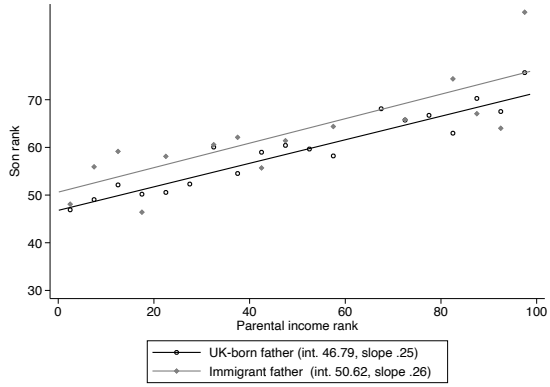
C.14.5.1 Additional years of child income data

Figure C.14.7: Intergenerational mobility: UK number of years of child income data

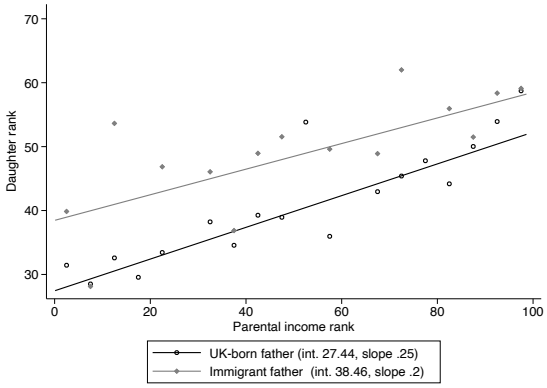
(a) Sons, child income 2000



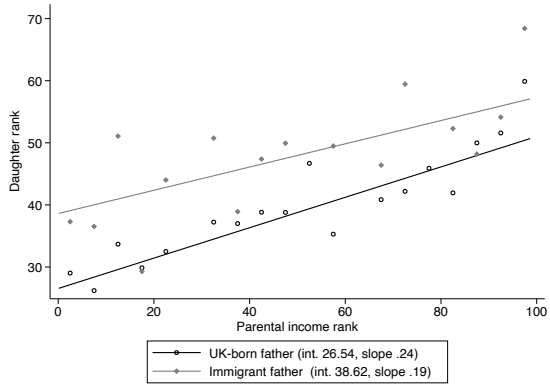
(b) Sons, child income 2000 and 2004



(c) Daughters, child income 2000



(d) Daughters, child income 2000 and 2004



Notes: This figure plots estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000 and 2004, and parental income in 1980 and 1986 respectively. Income ranks, 0-100.

Table C.14.7: Intergenerational mobility estimates: UK, child income 2000 and 2004

VARIABLES	(1) Sons	(2) Daughters
Immigrant father = 1	3.827	12.07***
	(2.754)	(2.794)
Parents' rank	0.247***	0.245***
	(0.0140)	(0.0158)
Immigrant father # rank	0.00996	-0.0576
	(0.0476)	(0.0551)
Constant	46.79***	26.54***
	(0.822)	(0.864)
Observations	4,383	3,930
R-squared	0.075	0.067

Notes: This table reports estimates of Specification 1, regressing the income ranks of sons/daughters on that of parents. Children born in 1970. Immigration status is determined by father's country of birth. Child income measured in 2000 and 2004, and parental income in 1980 and 1986 respectively. Income ranks, 0-100. 95%-confidence interval indicated. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

C.15 Country-specific details & results: United States

C.15.1 Linked data

We make use of aggregate data that has been made public by the Opportunity Insights project (available at https://opportunityinsights.org/data/). This dataset includes all children born between 1978 and 1983 who can be linked to their parents. Parents are identified as individuals who claimed these children as dependents in their tax records (i.e., on a 1040 tax form) at some point between 1994 and 2015, and who were between the ages of 15 and 50 at the time of the child's birth (to minimize links to grandparents or other guardians). The process used to identify children and their parents relies on Social Security Numbers, and thus prevents the inclusion of unauthorized immigrants in either generation. For additional details on the linking process, we refer the reader to Chetty et al. (2014a) and Chetty et al. (2020).

In the parental generation, income refers to total pre-tax income at the household level. Each child's parental household income is the average of parents' income in 1994, 1995, 1998, 1999, and 2000. Non-filers in any particular year are assigned an income of zero. In the children's generation, income refers to the average annual income across 2014 and 2015 (either individual or household income).

The primary sample used in this paper comes from the file titled "Non-Parametric Estimates of Income Ranks for Second Generation Immigrant Children by Parent Income, Country of Origin, and Gender." This table reports predicted outcomes separately by country of origin, income ventile, and gender, allowing us to study children of US-born parents and of immigrant parents. The sample used to produce this file only considers children born in the United States. Parental country of birth comes from linking parents to the 2000 Census Long Form or the 2005–2015 American Community Surveys. To classify individuals as being the children of immigrants, this table prioritizes father's country of origin. Given Census disclosure rules, this table omits countries of origin with fewer than 500 children in each statistic. The sample size of children with US-born parents and foreign-born parents is approximately 5.6 million and 311,000 individuals, respectively. The 21 parental countries of origin in this table (henceforth, "21 top sending countries") are Canada, China, Colombia, Cuba, the Dominican Republic, Ecuador, El Salvador, Germany, Greece, Guatemala, Haiti, India, Israel, Italy, Jamaica, Japan, Mexico, the Philippines, South Korea, the United Kingdom, and Vietnam.

As a robustness check, we also use statistics from the file titled "All Outcomes at the National Level by Race, Gender and Parental Income Percentile." This table reports predicted outcomes for children by mother's immigrant status (i.e., whether she was born in the U.S.), income percentile, and gender. The two main differences between the sample in this table and the one for our baseline sample are that this table includes children who were not born in the United States and that this table prioritizes mother's country of birth. Immigrant children in this sample grew up in slightly lower-income households compared to immigrant children in our baseline sample (Figure C.15.10). However, they exhibit a similar advantage in intergenerational mobility than those in our baseline sample (Figures C.15.8 and C.15.9).

C.15.2 Cross-sectional data

For cross-sectional results, we rely on publicly available Census data. For the children's generation, we use the 2006–2015 Current Population surveys (CPS; Flood et al., 2024). We restrict the sample to US-born men ages 30–50. We further restrict the sample to men with a father born in the United States or in one of the 21 top sending countries as identified by Opportunity Insights. Throughout the analysis, we rely on the CPS survey weights to maintain sample representativeness.

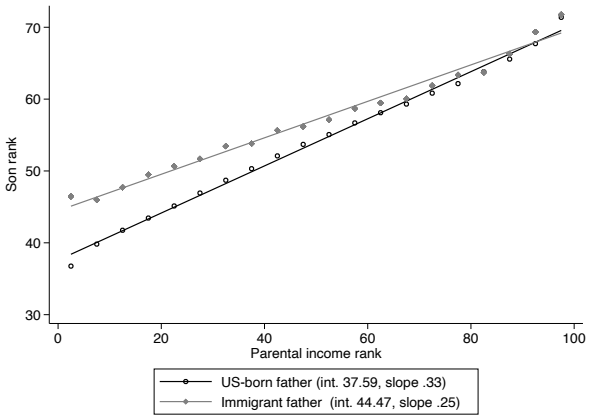
For the parental generation, we use the 5% sample of the 1980 Census (Ruggles et al., 2020). We restrict the sample to men ages 30–50 and who were father of an individual younger than 18 in the household. To implement this final restriction, we use the variable "poploc" indicating father-child relationships within the household. Finally, we restrict the sample to US-born men and to men born in the 21 top sending countries as identified by Opportunity Insights.

For both generations, we use two variables to measure income: the one corresponding to pre-tax wage and salary income (i.e., earnings), and the one corresponding to total pre-tax personal income or losses from all sources (i.e., total income). Note that this differs from Abramitzky et al. (2021), which uses predicted income (i.e., occupation-based income scores) to measure income for both generations.

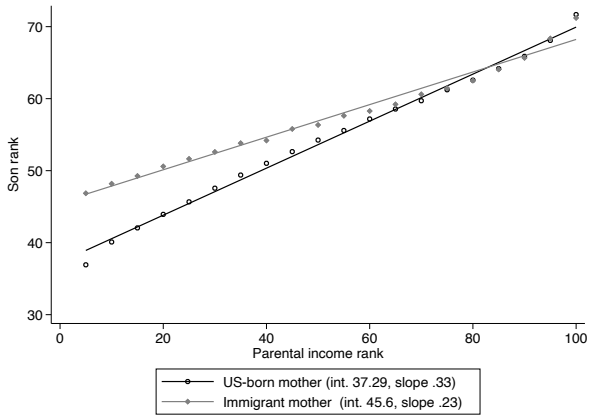
C.15.3 Linked data results

Figure C.15.8: Rank-Rank Relationship of Men

(a) Using father's birthplace



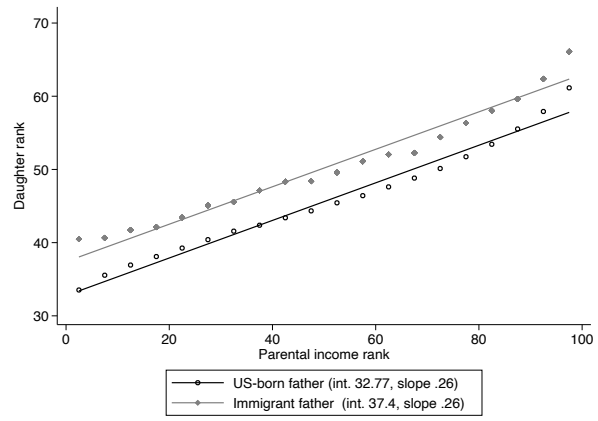
(b) Using mother's birthplace



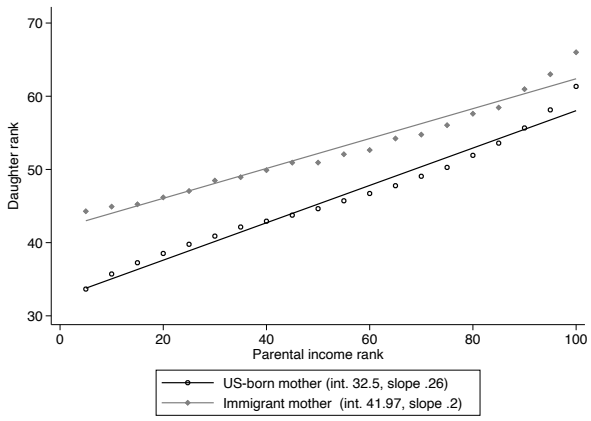
Notes: This figure plots the relationship between parental household income rank (x-axis) and sons' own adult individual-level income rank (y-axis). In panel (a), immigration status is determined by the father's country of birth. In panel (b), immigration status is determined by the mother's country of birth. Income ranks are determined within cohorts.

Figure C.15.9: Rank-Rank Relationship of Women

(a) Using father's birthplace



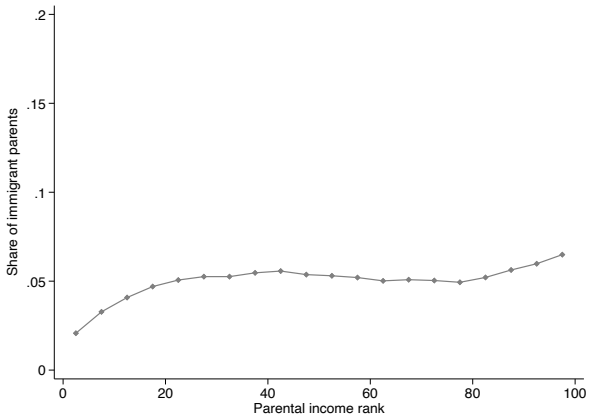
(b) Using mother's birthplace



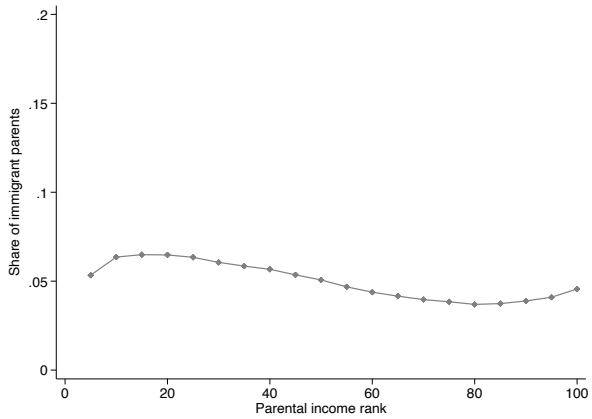
Notes: This figure plots the relationship between parental household income rank (x-axis) and daughters' own adult individual-level income rank (y-axis). In panel (a), immigration status is determined by the father's country of birth. In panel (b), immigration status is determined by the mother's country of birth. Income ranks are determined within cohorts.

Figure C.15.10: Share of children with immigrant parents by parental income ventile

(a) Using father's birthplace



(b) Using mother's birthplace



Notes: This figure shows the proportion of children of immigrants at each parental income ventile depending on whether we use the father's or mother's birthplace to determine immigration status.

Table C.15.8: Oaxaca-Blinder decompositions, child income rank, United States

	(1) Sons: pooled	(2) Sons: no immi. ref.	(3) Sons: immi. ref.	(4) Daughters: pooled	(5) Daughters: no immi. ref.	(6) Daughters: immi. ref.
Immigrant father	58.08***	58.08***	58.08***	51.16***	51.16***	51.16***
	(0.0178)	(0.0178)	(0.0178)	(0.0187)	(0.0187)	(0.0187)
No immigrant father	55.31***	55.31***	55.31***	46.61***	46.61***	46.61***
	(0.00532)	(0.00532)	(0.00532)	(0.00430)	(0.00430)	(0.00430)
Difference	2.776***	2.776***	2.776***	4.559***	4.559***	4.559***
	(0.0186)	(0.0186)	(0.0186)	(0.0192)	(0.0192)	(0.0192)
Total explained	−0.120***	−0.121***	−0.0940***	−0.0280	−0.0280	−0.0279
	(0.0231)	(0.0233)	(0.0181)	(0.0188)	(0.0188)	(0.0188)
Total unexplained	2.896***	2.897***	2.870***	4.587***	4.587***	4.587***
	(0.00553)	(0.00577)	(0.00291)	(0.00375)	(0.00375)	(0.00376)
- Parental income rank	−4.169***	−4.167***	−4.195***	−0.0525***	−0.0525***	−0.0526***
	(0.00836)	(0.00852)	(0.00694)	(0.00979)	(0.00978)	(0.00980)
- Constant	7.064***	7.064***	7.064***	4.640***	4.640***	4.640***
	(0.00530)	(0.00530)	(0.00530)	(0.00832)	(0.00832)	(0.00832)
Observations	3,021,620	3,021,620	3,021,620	2,900,490	2,900,490	2,900,490

Notes: This table reports a Oaxaca-Blinder decompositions of the gap in income ranks between children of immigrants and children of locals (Specification 4). We follow the approach and terminology of Fortin et al. (2011), and estimate the fraction of the income rank gap that can be "explained" by differences in parental income distributions, and the fraction that is "unexplained" by parental income distribution differences, and rather due to differences in intergenerational mobility parameters. We report versions using pooled estimated coefficients and each of the groups' coefficients as reference levels. Children born in 1978-1983. Immigration status is determined by father's country of birth. Child income measured in 2014-2015, and parental income 1994-2000. Income ranks, 0-100, determined within cohorts. Robust standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

C.15.4 Cross-sectional results

Table C.15.9: Cross-sectional data: Summary Statistics, United States

Fathers: 1980 Census

	Immigrants	US-born
Age	38.946	38.525
Rank gap, total income	41.391	50.494
Rank gap, earnings	42.764	50.415
ln(total income)	9.553	9.763
ln(earnings)	9.516	9.734
Total income > 0	0.976	0.986
Earnings > 0	0.881	0.887
Share of population	0.054	0.946
N	46190.000	805785.000

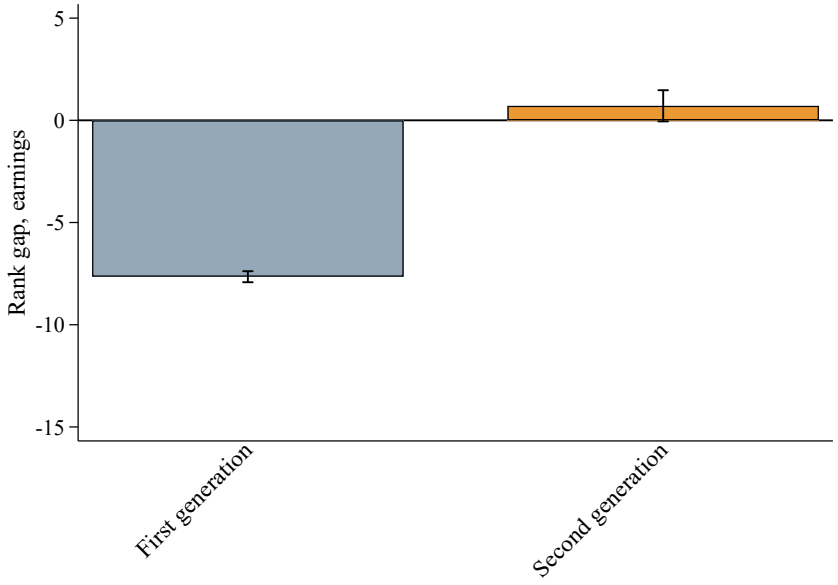
Sons: 2006–2015 Current Population Survey

	Immigrant father	US-born father
Age	38.257	40.455
Rank gap, total income	50.305	49.986
Rank gap, earnings	50.797	49.963
ln(total income)	10.584	10.589
ln(earnings)	10.652	10.679
Total income > 0	0.949	0.951
Earnings > 0	0.851	0.828
Share of population	0.044	0.956
N	9347.000	215952.000

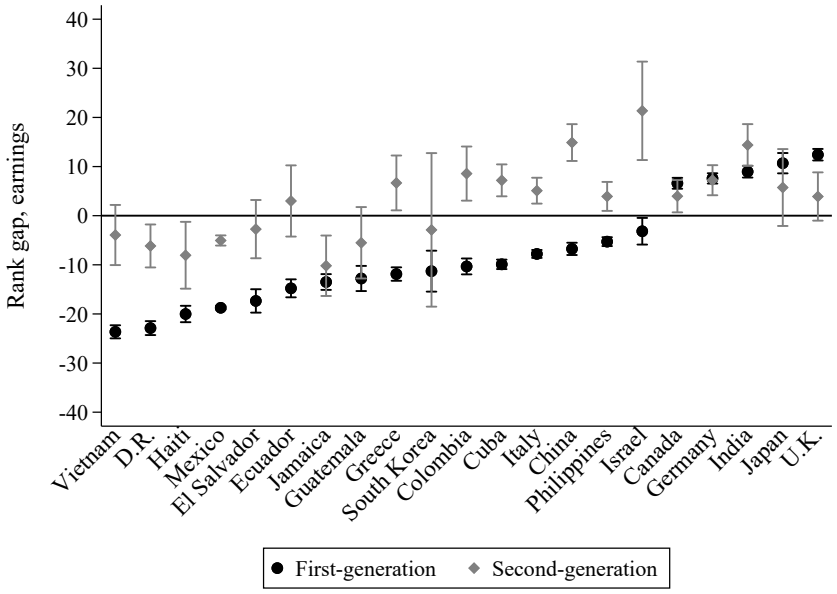
Notes: This table reports summary statistics of the cross-sectional sample. Fathers are observed in the 1980 Census and the children's generation is observed in the 2006–2015 Current Population Surveys. Immigration status is determined by the father's country of birth. Income ranks are determined within cohorts.

Figure C.15.11: Cross-sectional results using earnings, 1980–2010 cohort

(a) Overall



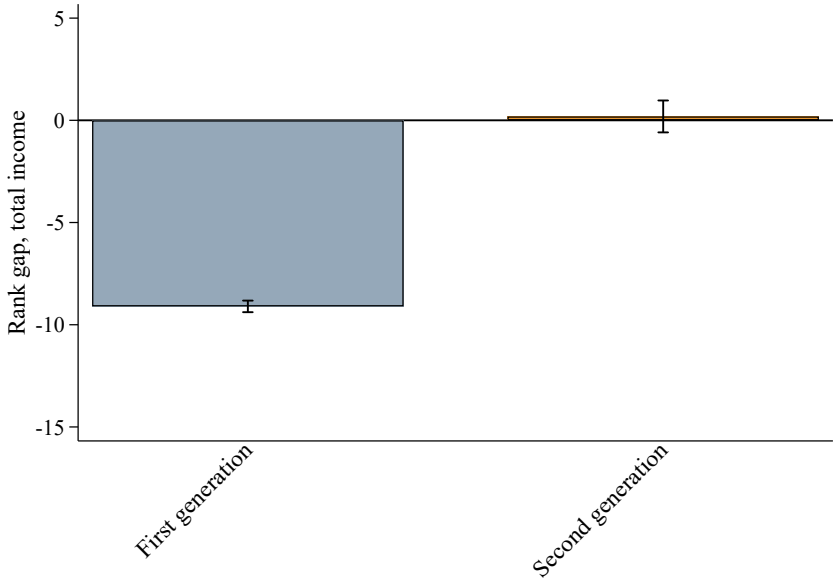
(b) Country-by-country



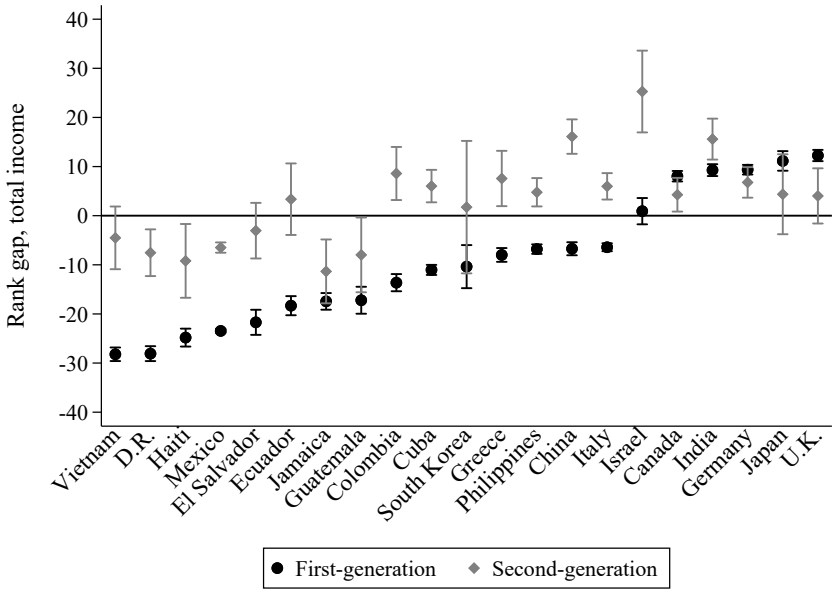
Notes: Both panels in this figure use a measure of earnings for both generations. Panel (a) plots the difference in ranked earnings between foreign-born and US-born fathers in the 1980 Census. Panel (b) plots the difference in ranked earnings between the children of immigrants and of US-born parents using the 2006–2015 Current Population Survey. Immigration status is determined by the father's country of birth. Income ranks are determined within cohorts.

Figure C.15.12: Cross-sectional results using income, 1980–2010 cohort

(a) Overall



(b) Country-by-country



Notes: Both panels in this figure use a measure of total income for both generations. Panel (a) plots the difference in ranked earnings between foreign-born and US-born fathers in the 1980 Census. Panel (b) plots the difference in ranked earnings between the children of immigrants and of US-born parents using the 2006–2015 Current Population Survey. Immigration status is determined by the father's country of birth. Income ranks are determined within cohorts.