Background Matters, but not Whether Parents are Immigrants: Outcomes of Children Born in Denmark[*]

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April 2024

Abstract

In Europe, the children of migrants often have worse economic outcomes than those with local-born parents. This paper shows that children born in Denmark with immigrant parents (first-generation locals) have lower earnings, higher unemployment, less education, more welfare transfers, and more criminal convictions than children with local-born parents. However, when we condition on parental socio-economic characteristics, first-generation locals generally perform as well or slightly better than the children of locals. While children of immigrants are more likely to come from deprived backgrounds, they do not experience substantially different outcomes conditional on parental background.

JEL classifications: J15, J61, J62, N34

I Introduction

In Europe, the local-born children of immigrants (first-generation locals) often have worse education and labour market outcomes than the local-born children of locals, although often better outcomes than their immigrant parents (e.g., Tranæs & Zimmermann, 2004; Heath et al., 2008; Algan et al., 2010; OECD, 2010, 2017; OECD/EU, 2018, 2023; Sweetman & Van Ours, 2015; Hald Andersen et al., 2020). For example, an OECD/EU (2018) report found that "EU-wide, the reading score of the 15-year-old native-born with foreign-born parents lags behind that of their peers with no migrant background by 25 points – over half a school year" and that "across the EU, the employment gap between the native-born of native- and foreign-born parentage is 6 points." These education and employment gaps in the EU do vary across immigrant groups and countries (and are not always negative), but the poor outcomes for first-generation locals are often brought up in political debates on the implications of immigration and are seen as something we need to understand and do something about. The issue is becoming increasingly important because the share of the population with at least one immigrant parent is rising in most OECD countries. OECD/EU (2023) report that across OECD countries around 8% of those aged 15-34 are local-born to two immigrant parents and 6% to one local-born and one immigrant parent.

Understanding the disadvantage of first-generation locals is the main motivation of this paper. There are a number of hypotheses for why first-generation locals often do worse than those with local-born parents. First, it may be the fact that the parents are immigrants that is important. It could be that first-generation locals speak a foreign language at home (e.g., Chiswick, 1977; Dustmann et al., 2012), or that the immigrant parents transmit culture and attitudes to their children more appropriate to the parents' country of origin than the country in which their children are growing up (e.g., Borjas, 1993; Rooth & Ekberg, 2003; Fernández & Fogli, 2009; Blau et al., 2013). It could also be that first-generation locals face discrimination especially if they are a visible minority (e.g., Bertrand & Mullainathan, 2004; Zschirnt & Ruedin, 2016). But it may also be the socio-economic status of the parents that is more important in explaining outcomes for their children than whether they are immigrants. A number of recent papers find that differences in educational outcomes between the first-generation locals and children of locals are to a large extent driven by differences in parental characteristics (e.g., Belzil & Poinas, 2010; Borjas, 1992; Dustmann et al., 2012; Fekjær, 2007; Matos, 2010; Nielsen et al., 2003; Oberdabernig & Schneebaum, 2017; Schneebaum et al., 2016). Some papers suggest that this finding also holds when considering involvement with the criminal justice system.[1] Lastly, a couple of papers have also considered differences

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[1] Nielsen et al. (2019) review the literature on the relationship between crime and ethnic background that

in labour market outcomes conditional on some parental characteristics, namely parental occupation and/or education (Belzil & Poinas, 2010; Borjas, 1992; Jonsson, 2007). Card et al. (2000), and more recently, Abramitzky et al. (2021) show that first-generation locals generally experience higher rates of upward mobility compared to children of locals in US.

However, this existing literature on the intergenerational mobility of first-generation locals is fragmented. Some papers control for parental occupation when considering conditional gaps in test scores between first-generation locals and children of locals. Others control only for parental income (or average income within parental immigrant group) when considering gaps in child income. But no papers apply a complete set of relevant parental controls, while also considering a wide range of child outcomes, most likely due to data constraints. Thus, it is hard to draw general conclusions from the literature, e.g. on the relative importance of parental characteristics in explaining gaps between first-generational locals and children of locals for different outcomes. We propose a unified framework in which we are able to consider all relevant child outcomes and in which we can control for all the parental characteristics that are otherwise considered separately in the existing literature. This allows us to make comparisons of the relative importance of parental characteristics in explaining gaps in outcomes.

Existing papers also often impose strict functional forms on the child-parent intergenerational relationship. We show that the choice of functional form is important due to non-linearities in the child-parent rank-rank relationship in income, particularly at the bottom of the income distribution. As immigrant parents often are in the lower part of the income distribution, these non-linearities are especially important to address when considering outcomes of first-generation locals. Therefore, we deviate from the existing literature by modelling the child-parent relationship in outcomes more flexibly, and thus, impose fewer restrictions on the functional form of the relationship between child and parent outcomes. The aim with this paper is therefore both to provide a more complete overview of the outcomes of first-generation local as well as to provide a consistent framework for future work in this area of research.

We compare the outcomes of children of migrants with the children of locals in Denmark. Their share in the population has been rising; by 2021 almost 14% of newborns in Denmark have two immigrant parents (Statistics Denmark, 2021). We extend the previous literature

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utilise Danish data. They conclude that although some of the reviewed papers include controls for parental socioeconomic background, e.g. Andersen & Tranæs (2011) and Andersen & Tranæs (2015), a more complete set of controls should be considered. We aim to fill that gap in the literature. Andersen & Tranæs (2011) and Andersen & Tranæs (2015) also use Danish register data to control for some parental characteristics when considering whether or not male first-generation locals are more criminal than male children of locals, but they also include socioeconomic outcomes of the children as controls in the same regressions. Hence, the effect of parental characteristics alone is not estimated.

(which are mostly for the US, e.g., Borjas, 1993; Zhou, 1997; Card et al., 2000; Abramitzky et al., 2021) by considering a wider range of outcomes: education, earnings, unemployment, welfare transfers, and involvement with the criminal justice system. For all of those, we show that, unconditionally, first-generation locals have worse outcomes than those with local-born parents. The earnings gap is different from the US where the children of migrants have higher earnings, on average, than those with US-born parents (Abramitzky et al., 2021). This is likely because the United States finds it easier to attract well-qualified immigrants than many Continental European countries.[2] But, similar to the US, we find that when one controls for parental socio-economic background, the children of migrants do as well as, and often slightly better, than those with local-born parents. The children of migrants have worse outcomes because they come from disadvantaged households which, as we know from the literature on intergenerational mobility, leads to worse average outcomes in later life (e.g., Chetty et al., 2014; Landersø & Heckman, 2017; Heckman & Landersø, 2022).

An exception to this general conclusion is that first-generation locals are more likely to be sentenced to prison by age 30, also conditional on parental characteristics. First-generation locals may be more likely to be sentenced to prison because they are more likely to commit crimes than children with two local-born parents, or it could be the case that the criminal justice system discriminates against them, e.g. if the police target visible minorities or certain neighbourhoods where first-generation locals are over-represented. We shed more light on this explanation by considering the share of criminal charges that are later dropped by the police and do not lead to a conviction. We find that first-generation locals are also more likely to experience criminal charges that are later dropped, which we interpret as suggestive evidence of police targeting. Only because of our unified framework in which we consider multiple child outcomes, we can detect that parental characteristics are relatively less important in explaining gaps in prison rates, and thus, motivate a discussion of the mechanisms behind this result.

We also consider the impact of a wide range of parental characteristics on the outcomes of their children. We show this matters; for example, parental unemployment predicts the income of their children even after controlling for parental income. And, generally, the wider the set of parental characteristics included, the better the performance of the children of migrants relative to those with local-born parents. Using Oaxaca-Blinder decomposition methods, we verify that the relatively better conditional outcomes of first-generation locals are driven by differences in the levels of parental characteristics, rather than by differences

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[2]See e.g. OECD (2012) who reports education levels of immigrants by destination countries. Their Figure 1.5 shows that immigrants tend to be more educated in the US compared to both Denmark and the EU15 average. Furthermore, Figure 1.6 shows that the average educational level of immigrants has recently increased in Denmark, while it has been consistently high in the US.

in the coefficients on parental characteristics.

In contrast to the existing literature, we show that it is important to distinguish between those who have two immigrant parents, and those with one immigrant and one local-born parent. The latter group is often omitted in the existing literature or parental migrant status is only defined by the birthplace of one parent (which induces misclassification if different parental migration status is common). In our sample, the group with one immigrant parent is twice as big as the group with two immigrant parents. We show that the group of children with one parent born in Denmark and one parent born abroad look different than group of children with two parents born abroad in terms of outcomes and in terms of parental origin. Unconditionally, those with one immigrant parent generally do better than those with two parents born outside Denmark. Conditional on parental characteristics, however, the opposite is generally true. Again, we aim to provide a framework that can be applied consistently across contexts where the two groups are considered separately.

Our conclusions are robust to a range of alternative parental controls, e.g. the timing in the child's life of parental income, and whether parents remain together or separate. We find some evidence that children born to newly-arrived parents have better outcomes conditional on parental income; a potential indication that their parents may be less likely to have secured a job with earnings that fully reflects their ability and/or human capital at the time of birth of the child of interest.

Although aggregate estimates of the outcomes of first-generation locals are useful, the outcomes of first-generation locals may vary across subgroups. For example, many of the immigrant parents' countries of origin have lower female labour force participation rates than Denmark, and parental cultural background could potentially affect child outcomes (see e.g., Fernández & Fogli, 2009). However, we find that conditional on parental characteristics, female first-generation locals tend to do better across outcomes when compared to children of two local-born parents.

We also examine whether cultural values and economic conditions in parental countries of birth matter for the outcomes of first-generation locals. We find that the unconditional outcomes of first-generation locals with two immigrant parents are strongly related to the cultural values of their parents' country birth, but this relationship is generally much weaker and statistically insignificant when we instead consider outcomes conditional on parental characteristics. In addition, we consider levels of GDP per capita in parental countries of birth and its relationship to the outcomes of first-generation locals. We find no systematic relationship between the economic conditions of parental countries of birth and child outcomes.

Finally a note on terminology. The local-born children of immigrants are often referred

to as second-generation immigrants, but they are not migrants. Reflecting this, they are also sometimes referred to as people with a migrant background, but this applies to all of us if we go back far enough. Similar to OECD/EU (2023), we do not use these terms. In this paper, we prefer to refer to the local-born children of immigrants as first-generation locals. We believe this term better reflects their background as well as their circumstances in their country of birth.

The plan of the paper is as follows. The next section describes the data and the sample. The third section presents regression results for labour market outcomes, welfare transfers, years of education, and criminal histories of first-generation locals compared to children with local-born parents. The fourth section explores robustness of conclusions to alternative parental controls. The fifth section considers various dimensions of heterogeneity, including whether there are differences in the effect of being a first-generation local across the distribution of parental characteristics, differences in outcomes by gender, and differences in outcomes by parental country of birth. Finally, we conclude.

II   Background and data

We use Danish register data (1980 to 2017) to link parents with their children (Statistics Denmark, 2020). This allows us to observe both maternal and paternal labour market outcomes throughout children's upbringing as well as the children's outcomes in later life.

II.A   The children

Our dataset includes all children born in Denmark in the years 1980-1987 with both parents known.[3] 1980 is chosen because it is the start date of most of the Danish registers, and so this allows us to have complete information on parental circumstances throughout childhood of the individuals in our sample. Our most recent cohort is chosen because our latest available data are from 2017, and we want to observe outcomes of the children in the year they turn 30.

For most of our analyses we split the data into four groups. First, the reference group of 362,460 children with two parents born in Denmark. Second, 10,399 children (2.62% of sample) with two parents born outside Denmark; this share of first-generation locals with two immigrant parents is similar to the 3.1% of the total 2018 population (Statistics Denmark, 2018). Third, 20,908 children (5.27% of sample) with one parent born in Denmark and one parent born outside Denmark. Fourth, we separately consider 2,650 children (0.67%

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[3]Further details on data cleaning and sample selection in the Appendix OA.1

of sample) with at least one parent born in Greenland or the Faroe Islands. Although people from Greenland and the Faroe Islands are Danish citizens, the countries are relatively politically independent of Denmark, and different languages are spoken; and as we will show, their outcomes often look more like those of immigrants. Comparing this group of children with those of immigrant parents is interesting because the value of citizenship and naturalisation has attracted substantial attention in the literature (e.g., Bratsberg et al., 2002; Chiswick, 1978).

In Table 1, we further divide our sample to show the regions of origin for the parents of the children in our sample. The parents of first-generation locals are most commonly from the Middle East, the Nordic Countries, the EU-15 (excluding Nordics), and Asia.[4]

II.B   The outcomes

We consider a variety of outcomes for the children in our dataset. We analyse earnings and unemployment[5] in the year they turn 30 as well as the levels of transfers/public benefits.[6] We also consider the level of education by age 30 and their involvement with the criminal justice system (the number of offences for which they have been found guilty, whether they have ever received a prison sentence, and the number of charges which were dropped or where they were found not guilty).[7] A dropped charge or being found not guilty of a charge is an important outcome as it may be that first-generation locals are more targeted by the police leading to more criminal convictions but not necessarily more underlying crime.

Using a wide range of outcomes provides a more complete picture of how first-generation locals are doing. Measures of the outcomes are all provided by Danish registers which means that we have population-level data for all outcomes and that measurement error due to self-reporting is not a concern. Appendix OA.1 provides more detail on the data.

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[4]Most continents or regions of origin are straightforward to define, but the definition of the Middle East varies across contexts. When referring to the Middle East, we mean the combination of the MENAP and MENAT regions, which include some Northern African countries, Israel, Turkey, Pakistan, and Afghanistan. We split the European countries into the Nordics, EU-15 ex. Nordic, EU-13, and non-EU. We categorise Yugoslavia as non-EU because only a subset of the former Yugoslavian republics have joined the EU as part of the EU-13 expansion. Although some definitions of the Middle East include Cyprus, we categorise Cyprus as EU-13. A list of countries included in each region is included in Online Appendix Table OA.1. If we do not observe any children with parents born in a given country, the country is excluded from the list, e.g. Lithuania, which otherwise would be included in EU-13. We include the United Kingdom in EU-15 as our sample period ends in 2018, i.e. before Brexit.

[5]Unemployment is defined as not working for at least half of the year and not being retired.

[6]Transfers/public benefits is the yearly sum of all transfers primarily financed by government institutions, including all unemployment benefits, child benefits, housing support, student benefits, and all public pensions.

[7]We generally follow the approach in The Danish Institute for Human Rights (2022) when identifying the cases for which individuals have been found not guilty or have had a criminal charge dropped, see Appendix OA.1 for more details.

The top half of Table 2 presents summary statistics for the children in our sample and whether differences from those with both parents born in Denmark are significant. First-generation locals have worse outcomes than the children of locals; lower earnings, greater reliance on public benefits, more unemployment and lower education. They also have more criminal convictions and are more likely to have been sentenced to prison, though also a higher proportion of criminal charges made against them are dropped or they are found not guilty. Those with two immigrant parents fare worst; those with one immigrant parent tend to be somewhere in between. Those with at least one parent from Greenland/Faroe Islands have many outcomes that are closest to those with two immigrant parents.

II.C   The parents

Using Danish register data, we can link children to their parents. We construct the following parental characteristics for both mothers and fathers: I) Aggregate income (inflation adjusted to 2013-levels) during the first 21 years of the child's life;[8] II) Years of unemployment during the first 21 years of the child's life; III) Parental occupation (2-digit ISCO88 code when the child is 21 years old, with added categories for retirement, unemployment, or unknown occupation); IV) Years of education when the child is 21 years old.

Education obtained in Denmark appears in the registers for both immigrants and non-immigrants, but any education obtained abroad by immigrants is registered upon arrival by surveying the individuals (Schultz-Nielsen & Skaksen, 2017). However, due to non-responses, there are many missing observations, so we report both specifications that include and exclude parental education.

The bottom half of Table 2 presents summary statistics for the parents in our sample. Immigrant parents have significantly lower education and earnings, and higher unemployment than the parents born in Denmark. These summary statistics mirror the results from the extensive literature on the outcomes of immigrants in Denmark, see e.g. Tranæs & Zimmermann (2004), Bonke & Schultz-Nielsen (2013), and Skaksen & Jensen (2016). For example, we see that first-generation locals with two parents born abroad grow up in families where both paternal and maternal earnings on average are less than half of that in families with two parents born in Denmark.[9] As we know that parental disadvantage is, on average, transmitted to their children, we are interested in whether this can be the explanation for the relatively worse outcomes of first-generation locals.

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[8]Consumer price index data are from Statistics Denmark (2023).

[9]Parental income distributions by number of parents born abroad are included in Figure OA.1 in Online Appendix OA.2

III Regressions

We start with regressions of child outcomes on dummy variables for whether they have one or two immigrant parents, or more than one parent born in Greenland/Faroe Islands. Next, we add a variety of controls for individual and parental characteristics. The individual characteristics we use are gender and 11 region of residence dummies. The region dummies are important as first-generation locals are more likely to live in Copenhagen (the capital of Denmark) where, for example, earnings are higher. Cohort-year dummies are included in all specifications.

For the parental controls, we need to decide what to include and the functional form to use. Regressions of child outcomes on parental outcomes are most commonly done in the literature on intergenerational mobility, and we use this to guide our approach.

Commonly only one parental outcome is considered, the same as the child outcome and the coefficient interpreted as a one-dimensional measure of the extent of intergenerational mobility (see e.g., Solon, 1999, for a review). Chetty et al. (2014) show that the relationship between child and parental log income in the US is non-linear while the rank-rank relationship is close to linear (see their Figure II), so the rank-rank model is preferred. Some research finds that educational and social mobility is similar in Denmark and the US despite more generous welfare policies in Denmark, so one might expect a similar relationship in Denmark (e.g., Chetty et al., 2014; Landersø & Heckman, 2017; Heckman & Landersø, 2022).

We plot the rank-rank relationship for Denmark in Figure 1; it can be seen that it is non-linear. As we consider the full history of parental income during childhood, our parental income ranks are less sensitive to temporary income shocks that may otherwise affect the rank-rank relationship and make it appear more linear at the bottom of the income distribution. Furthermore, we only consider labour market income whereas Chetty et al. (2014) include some benefits in their measures of income.[10] If we impose a linear model on the rank-rank relationship illustrated in Figure 1, the model would predict too high child income ranks at the bottom of parental income distribution. Because immigrant parents are concentrated at the bottom of the income distribution this would bias the estimate of the impact of having an immigrant parent. Because of the non-linear rank-rank relationship for Denmark, we therefore choose to control for parental income flexibly by including parental income percentile dummies, rather than imposing a linear relationship. This specification does not allow us to estimate a one-dimensional measure of intergenerational mobility, but that is not our focus; we simply want to control for parental characteristics in the best way

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[10]When considering labour market integration of first-generation locals, labour market income is more relevant than income including benefits.

possible.

The literature on intergenerational mobility typically only controls for one parental characteristic, which is the same as the child outcome; a practice that helps to provide a one-dimensional estimate of intergenerational mobility. However, many parental characteristics may have explanatory power for child outcomes. To illustrate this, Figure 1 shows how the rank-rank income relationship changes when other parental controls are included; unemployment, occupation, and education. One can see that the inclusion of parental unemployment noticeably alters the relationship, indicating that parental unemployment has some extra explanatory power for child outcomes. There are a number of possible reasons for this. A given 21-year average of income can be generated through several different income processes, and conditional on the 21-year average level of parental income, more unemployment may mean more instability within the household with consequences for children. And, for example, Paul & Moser, 2009 find that unemployment itself has negative effects on parental wellbeing which again may affect the outcomes of children. Figure 1 also shows that the additional impact of subsequently controlling for parental occupation and education is much smaller.

In the light of this, the specifications we consider include percentile parental income dummies as well as dummies for parental years of unemployment (rounded to the nearest year). When relevant, we also include dummies for parent's 2-digit occupation and for years of education. We always include controls for both mothers and fathers.

In our basic specification, we estimate models of the following form:

$$(1) \qquad Y_i = \beta_0 + \sum_{j=1}^{3} \beta_1^j d_i^j + \sum_{p=2}^{100} (\beta_2^p m_i^p + \beta_3^p f_i^p) + \sum_k (\beta_4^k m_i^k + \beta_5^k f_i^k) + \beta_6 X_i + t_i + \epsilon_i$$

Where Y_i is outcome of interest, d_i^j is an indicator equal to 1 if individual i is categorised as a first-generation local in group j, m_i^p is an indicator equal to 1 if the income of the mother of individual i is in percentile p, f_i^p is an indicator equal to 1 if the income of the father of individual i is in percentile p, m_i^k and f_i^k are other maternal and paternal characteristics, X_i is a set of individual controls, and t_i cohort-year fixed effects. The coefficients β_1^1, β_1^2, and β_1^3 are the coefficients of interest; they give us the estimate of the differences in outcomes between the three groups of first-generation locals and children of locals that cannot be explained by differences in parental characteristics.

In Section V, we also consider gender differences in the estimated gaps in outcomes between children of locals and first-generation locals, and we further discuss and test the possibility that the coefficients on parental characteristics β_2^p, β_3^p, β_4^k, and β_k^p vary between

children depending on the number of parents born abroad.

III.A Earnings

Table 3 presents our results for earnings. In the first panel, the dependent variable is total annual labour income at age 30. The reported coefficients are the differences between the different categories of first-generation locals and those with two local-born parents. So the first column shows that those with both parents born outside Denmark earn, on average, about 51k DKK less (≈9k USD, 2013-level) than children with two local-born parents. The gap for those with a parent from Greenland/Faroe Islands is similar while the gap for those with only one immigrant parent is smaller at 21k DKK (≈3.8k USD, 2013-level).

The estimates in the second column now add in individual characteristics of the child; gender and region of residence dummies. The income gaps are now larger, primarily because the first-generation locals are more likely to live in Copenhagen where earnings are higher.

The third column adds controls for parental income (dummies for the percentiles as explained earlier). What is most striking is that, conditional on parental income, those with two immigrant parents are now found to earn significantly more than the children of local-born parents. For those with one immigrant parent or at least one from Greenland/Faroe Islands, the income gaps are still negative but much smaller than when there are no controls for parental background.

The fourth column now adds extra controls for parental unemployment in childhood. For those with two immigrant parents, this increases their earnings advantage, though the extra impact of adding unemployment is smaller than using parental income alone. For the other two immigrant groups, the estimated gaps in earnings become smaller, but remain negative.

The fifth column adds additional controls for parental occupation and the sixth column parental education. Sample sizes are smaller here especially when parental education is included (and the reduction in sample size is mostly among first-generation locals), but the pattern remains. Once one controls for the socio-economic background of first-generation locals, those with two immigrant parents out-perform those with two local-born parents and the under-performance of those with one immigrant parent and those with parents from Greenland/Faroe Islands is much reduced.

This conclusion is robust to the way in which we measure the earnings outcomes of the children. The second panel uses the income rank as in Chetty et al. (2014). The third panel uses the inverse hyperbolic sine which approximates the log but allows for zero values. The fourth panel uses the log of annual earnings which excludes the zeroes. The final panel uses an estimate of the log hourly wage where hourly wages are calculated from employers'

monthly reports of hours and earnings to the tax authorities.[11] The conclusions are always the same. For example, if we included only individual characteristics, those with immigrant parents are estimated to have 4.5% lower hourly earnings but this becomes an earnings premium of 5.4% when all parental controls are included.

Our focus have been on mean outcomes but distributional effects may also be of interest. We investigate this in the Online Appendix (Table OA.2) where the outcome variables are indicators of labour market income exceeding a range of percentile thresholds (10th/25th/50th/75th percentiles, determined separately by child gender). Our conclusions are similar to the main analysis. Unconditional on parental characteristics, children with two immigrant parents are much less likely to reach high levels of income, but conditional on parental characteristics, the reverse is true. Children with one immigrant parent are more likely to reach high levels of income compared to children with two immigrant parents unconditional on parental characteristics; the opposite is true conditional on parental characteristics.

III.B   Transfers, unemployment, and education

In Table 4, we analyse gaps between first-generation locals and children with two local-born parents in transfers from the welfare system, unemployment rates, and completed years of education.

The first panel of Table 4 considers welfare transfers. Columns 1 and 2 show that without any parental controls, all types of first-generation locals receive significantly more transfers than the children of local-born parents. But, once we include parental controls, these differentials are greatly reduced and, as for earnings, change sign for those who have two parents born outside Denmark. Once we control for parental characteristics this group is likely to receive a lower level of public transfers.

The second panel looks at unemployment. Again, Columns 1 and 2 show that without any parental controls, all types of first-generation locals are significantly more likely to be unemployed than the children of local-born parents. The differences are large, e.g. 12 ppt for first-generation locals with two immigrant parents. But, including parental controls reduces the magnitudes of the differentials and, again, those with two immigrant parents are 2 ppt less likely to be unemployed once we control for all parental characteristics. For this

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[11]See e.g., Jensen (2021) for more details on the monthly employment register. These data are available from 2008, and thus, covers the entirety of our sample period of the children. All income measures, but hourly wages, include self-employed, but as self-employed are not required to report hours to the tax authorities we cannot compute their hourly wages. Measures of annual labour market income, including income from self-employment, is available from 1980.

outcome, controlling for parental unemployment is very important in changing the sign of the differential for first-generation locals with two immigrant parents.

Finally, the third panel looks at years of education. Yet again, Columns 1 and 2 show that without any parental controls, all types of first-generation locals have significantly less education than the children of local-born parents. However, once we control for parental characteristics, these differentials again change sign for both those with one and two immigrant parents and are much reduced for the group with at least one parent from Greenland/Faroe Islands.

III.C   Involvement with the criminal justice system

This section considers involvement with the criminal justice system. It is important to remember this is not exactly the same as crime, as not all crimes are solved and some of those found guilty of an offence may be innocent. This is particularly important given common accusations of discrimination in the criminal justice system.

The first panel of Table 5 considers the number of guilty charges received by age 30 for all offences, excluding traffic offences. Without any parental controls, first-generation locals have significantly more guilty charges. However, as before, the difference between first-generation locals and those with two local-born parents disappears when we control for parental background; again, controlling for a wide range of parental characteristics matters here.

Most of the offences included in the first panel are punished by a fine, so are not serious crimes. The second panel considers convictions for more serious offences where a prison sentence (including a suspended sentence) was given. Columns 1 and 2 show that without any parental controls, all types of first-generation locals are more likely to have received a prison sentence than the children of two local-born parents. In line with previous results, these differentials are greatly reduced when including parental controls, but unlike most other outcomes, we do not observe sign reversal for any of groups of children with parents born abroad.

That first-generation locals are more likely to have been sentenced to prison, even conditional on parental characteristics, could be driven by at least two different factors. First, it could be that they are more likely to commit crimes than children with two local-born parents. Secondly, it could be the case that the criminal justice system discriminates against them, e.g. if the police target visible minorities or certain neighbourhoods where first-generation locals are more likely to live. We cannot measure criminal activity not uncovered by the police.

As suggestive evidence, the third panel of Table 5 considers the number of charges which were dropped or where the individual was found not guilty. The first-generation locals have more dropped charges, an effect that is reduced but does not disappear when we control for parental characteristics. Finally, the fourth panel looks at the share of charges that are dropped. This is higher for those with two immigrant parents and affected much less by parental characteristics.

Our results on dropped charges provide suggestive evidence that police targeting may play a role in generating the results in the first panel of Table 5. Further research is warranted to decompose these results further, but that is beyond the scope of this paper.

IV   Additional parental controls

Although our main specifications include a broad range of parental controls, this section investigates the impact of additional controls related to family and income dynamics. We report results in the Online Appendix.

Parental income interactions: Our main specification controls separately for maternal and paternal income, but interaction effects between the two could be important. To investigate this, Tables OA.3-OA.4 report results in which we control for parental income interactions with indicators for 10x10 income decile interactions between the two parental income measures (i.e. 100 interaction-indicators). We find that controlling for these interactions does not change our qualitative conclusions.

Parental income at different child ages: Parental income at different child ages may have a different relationship to child outcomes. To investigate this, we divide parental income into three periods (years 1-7, 8-14, and 15-21 of each child's life), and calculate parental income percentiles for each of the three income measures. We then run three versions of our preferred specification (3) from Table 3 with separate parental income percentile controls for each of the three periods of parental income. The results from this exercise are presented in Tables OA.5-OA.6. We find that our baseline model fits the data better and the "overperformance" of first-generation locals with two immigrant parents is more significant. These results suggest that it is important to consider parental income over a long period of time as it minimises the sensitivity of the parental income measures to temporary/short-term income shocks.

The timing of parental arrival in Denmark: Outcomes for first-generation locals may depend on how long parents have been in Denmark when their child is born. In Appendix OA.2.C, Tables OA.7-OA.9, we split the three groups of first-generation locals into a total of nine groups based on the number of years parents have spent in Denmark when their

child of interest was born. We separately consider children whose parent(s) spent 2 years or less, 3 to 6 years, or more than 6 years in Denmark before having a child. For children with two parents born outside Denmark, we consider the maximum years spent in Denmark across the two parents, which should reflect the Denmark-specific institutional knowledge within the couple. We find that our conclusions are qualitatively similar across years spent in Denmark before birth, but the "overperformance" of first-generation locals conditional on parental characteristics is stronger for those whose parents immigrated soon before their birth. One possible explanation for this is that newly arrived immigrants are less likely to have secured a job that reflects their ability and/or human capital. Thus, their earnings are lower than their ability and/or human capital warrant, and these factors can positively affect child outcomes beyond what their earnings reflect.

Parental family separations: Family stability also plays an important role for child outcomes; see e.g. recent evidence on the effects of divorce on child outcomes in the US in Kearney (2023). To investigate this, Tables OA.3–OA.4 add 18 indicator variables for each number of years living together with both parents up to the age of 18.[12] We find that adding these interactions together with controls for parental income interactions (see above) does not change our qualitative conclusions. Adding controls for family dynamics (cohabitation with both parents and parental income interactions), slightly decreases the magnitudes of the estimated positive conditional gaps for children of two immigrant parents. This suggests that immigrant parents have slightly more favourable family dynamics relative to local-born parents conditional on the other parental controls.

Overall, our main result that the worse unconditional outcomes of first generation locals can be explained by parental background remains robust to including a wide range of parental controls.

V   Heterogeneity

V.A   Heterogeneity in returns to parental characteristics

For the estimates reported so far, we have assumed that the impact of parental region of birth is the same for all parental characteristics. However, for the US, e.g. Card et al. (2000) and Abramitzky et al. (2021) show that the "overperformance" of first-generation locals is higher for those with low-income parents, i.e. there are significant differences in both absolute and relative intergenerational mobility. Figure 2 provides a first check of whether the same is

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[12]We do not consider cohabitation beyond age 18 as children start leaving home for educational purposes around this age (although they may still be financially supported by their parents).

true in Denmark by visually examining the relationship between child and parental incomes for our groups. Figure 2 shows that the relationships are relatively parallel, although the estimates are noisy for the immigrant groups at higher income levels as there are relatively few immigrant parents with high incomes. In order to statistically test potential differences in the rank-rank relationship between child and parent income, we rerun specification (3) from Table 3, but add interaction terms between the number of parents born abroad and maternal/paternal income ventiles. This exercise shows whether first-generation locals have different outcomes from children of locals with similar levels of parental income. The results are included in Figure OA.2. We find no evidence of (linear) trends in differences in child outcomes across the parental income distribution by number of parents born abroad (i.e. no differences in relative income mobility).[13]

Abramitzky et al. (2021) estimate a linear rank-rank relationship between child and parental income in which it is simple to look at differences in intercepts and slopes. However, our relationships are not linear, and we have a wider set of parental controls. With many controls the natural way to investigate heterogeneity in coefficients is through a Oaxaca-Blinder decomposition. We estimate separate models for our different groups of children and then, following the terminology of Fortin et al. (2011), we decompose gaps between them into: 1) the part of the gap that can be attributed to differences in characteristics/covariates (the "explained" gap); 2) the part that can be attributed to differences in coefficients on/returns to characteristics (the "unexplained" gap). In Table 6, we include decompositions of gaps in outcomes between first-generation locals with two parents born abroad and the children of locals, using children of locals as the reference group. The gaps in outcomes between children of locals and first-generation locals are almost fully "explained" by differences in parental characteristics. The results in Table 6 also show positive "unexplained" gaps across income measures, implying that children of immigrants are predicted to do better than children of locals when setting covariates equal to the average values for children of locals. And the estimate of the "unexplained" gaps in outcomes are very similar (relative to the overall gaps) to those in our main specification (when we only allow differences in the intercept). Table OA.13 in the Appendix shows that "unexplained" gaps also are small relative to overall gaps when children with two parents born abroad are instead used as reference group.

To conclude, we find that allowing for differences in the slope coefficients on parental characteristics makes little difference to the conclusion that the "unexplained" gaps are relatively small compared to the overall gaps as the large group-level differences in parental

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[13]As an additional check of potential differences in relatively mobility by parental immigration status and despite the non-linearities in the rank-rank relationship in our setting (see Figure 1), we also run regressions following Equation 2 from Abramitzky et al. (2021) and reach similar conclusions.

characteristics are the main driver of our results. Thus, it makes little difference to estimate separate regressions by the number of parents born abroad, and allowing only for differences in intercepts makes it simpler to present and interpret results.

Online Appendix OA.4 contains the remaining Oaxaca-Blinder decomposition results, considering gaps between the other groups of first-generation locals and children of locals, and using first-generation locals as reference groups. Tables OA.16 to OA.21 also report Oaxaca-Blinder decompositions for the probability of surpassing different income thresholds. The Oaxaca-Blinder decompositions show that most of the differences between first-generation locals and children of locals can be explained by differences in parental characteristics.

V.B Heterogeneity by gender

This section investigates whether the outcomes of first-generation locals differ by gender. To do this, we allow the estimated gaps in outcomes to differ by gender in the specifications from Section III. We report only two specifications: the unadjusted gaps and the gaps after including individual controls and controls for parental income and unemployment. This corresponds to the specifications from Columns 1 and 4 in Tables 3 to 5, but with an added gender dummy and added gender interactions with the first-generation locals' group indicators. We prefer the specification with controls for parental income and unemployment as it maintains the largest sample size and because these parental characteristics matter the most for the child outcomes we consider.[14]

Table 7 reports the estimates of differences in earnings split by gender. We see that the positive earnings differentials conditional on parental characteristics for first-generation locals with two parents born abroad are almost entirely driven by female children. In other words, female children with two parents born abroad tend to outperform children of locals with similar parental background, whereas male children with two parents born abroad tend to do as well as children of locals with similar parental background. When considering children with only one parent born abroad, female children tend to do as well as children of locals conditional on parental characteristics. This is not the case for male children with one parent born abroad; even conditional on parental characteristics, they experience lower earnings compared to children of locals, although the gap in earnings is reduced substantially when controlling for parental characteristics.

We consider transfers, unemployment, years of education, and interactions with the criminal justice system in Table 8. When considering transfers, unemployment, and years of education, these results confirm the picture that female first-generation locals with two parents

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[14]Gender differences in outcomes could potentially also vary depending on the parental region of birth. We consider such interactions in Online Appendix OA.6.

born abroad perform best relative to children of locals conditional on parental characteristics, but also male first-generation locals with two parents born abroad tend to outperform children of locals with similar parental characteristics for these outcomes. Both female and male children with one parent born abroad have more years of education but are slightly more likely to be unemployed than children of locals conditional on parental characteristics.

The results for female children are generally mirrored when considering crime outcomes in Table 8, Colums 7-14. For male children, however, this is where we find the largest contrast in outcomes. Male children with two parents born abroad are much more likely to have a criminal conviction and more likely to have been sentenced to prison when compared with the children of locals. This gap is reduced but remains significantly different from zero after controlling for parental characteristics. However, male first-generation locals are also more likely to have a higher share of charges dropped or charges for which they are found not guilty. It may be that men with immigrant parents are simply more likely to get caught when committing a crime; for example, if they are more likely to be subjected to traffic stops and stop-and-frisk.

One possible reason for gender differences in gaps in outcomes between first-generation locals and children of locals could be differences in the children's own family formation and fertility (e.g. through a child penalty in earnings in the case of early parenthood). To examine a potential role of early marriage and early parenthood, we create indicator variables for early marriage (below the 25th percentile of age at first marriage, separately determined by gender) and early childbirth (below the 25th percentile of age at first birth, separately determined by gender). We then use these as outcomes in regressions both for the overall sample of children and separately by child gender. Results are reported in Table OA.10 in the Online Appendix. We find that unconditional on parental characteristics, female first-generation locals with two parents born abroad are both more likely to marry early and to have children early compared to daughters of locals. However, conditional on parental characteristics, first-generation local women are *less* likely to have children early, but remain *more* likely to marry early. In contrast, male first-generation locals with two immigrant parents remain more likely to both have children early and to marry early conditional on parental characteristics. These results suggest that daughters of immigrants may do particularly well because they are less likely to have children early compared to daughters of locals with similar parental characteristics.

V.C   Heterogeneity by parental country of birth

This section investigates heterogeneity in outcomes by parental country of birth. Table 1 shows that immigrant parents come from a diverse set of regions and this may affect out-

comes. Our approach is to first estimate Equation 1, but with parental country of origin indicators instead of group indicators d_i^j:

$$(2) \quad Y_i = \beta_0 + \sum_{j=1}^{N} \theta^j country_i^j + \sum_{p=2}^{100}(\beta_2^p m_i^p + \beta_3^p f_i^p) + \sum_k(\beta_4^k m_i^k + \beta_5^k f_i^k) + \beta_6 X_i + t_i + \epsilon_i$$

Where $country_i^j$ is a country indicator equal to 1 if parental country of origin is country j for child i. N is total number of parental countries of origin. $country^0$ is Denmark and is the reference group. Otherwise, the notation is similar to Equation 1. Again, we focus on our two preferred specifications: 1) the unadjusted gaps, and 2) the gaps after including individual controls and controls for parental income and unemployment. This corresponds to the specifications from Columns 1 and 4 in Tables 3 to 5.[15] The coefficients on the country indicators, θ^j, reveal how the outcomes of children from each parental country of origin differ from those of children with two local-born parents. We can estimate the gap in outcomes for parents from up to 50 countries.[16]

We then investigate whether these differences in outcomes differ according to the characteristics of the parental country of birth. A large body of literature finds that culture matters for both economic outcomes and attitudes (see e.g., Guiso et al., 2003, 2006; Fernández, 2011). Ek (2022) finds that the culture of countries of origin are predictive of individuals' productivity beyond what can be explained by education and experience. As cultural values may be transmitted from parents to children, the outcomes of first-generation locals could also depend on the culture of their parental country of origin (Fernández & Fogli, 2009; Dohmen et al., 2012; Ek et al., 2022).

To determine if the outcomes of first-generation locals are related to the culture of parental country of origin, we regress the estimated country indicator coefficients separately on measures of cultural values:[17]

$$(3) \quad \hat{\theta^j} = \rho_0 + \rho_1 culture_j + u_j$$

Where $culture_j$ is one measure of culture for parental country of origin j. ρ_1 gives the

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[15]We repeat this exercise three times for each of the 12 outcomes. First, we consider children with both parents born abroad in the same country relative to children with both parents born in Denmark, and next, we consider children with either a mother or father born abroad relative to children with both parents born in Denmark

[16]Parental origin countries with less than 10 child observations are dropped to data confidentiality rules from Statistics Denmark. For the group with two parents born abroad in the same country, the sample size is therefore smaller, yielding up to 24 country observations.

[17]We weight each country observation inversely to the standard error of the estimate coefficient on the country indicator.

relationship between culture of parental country of origin and child outcomes.

As we only have up to 50 countries there is a limited set of regressors we can include. We use four widely used measures of cultural values derived from the World/European Values Surveys (Inglehart et al., 2014; EVS, 2020).[18] First, we consider the two measures of from Inglehart & Baker (2000) and Inglehart & Welzel (2005): *survival vs. self-expression values* and *traditional vs. secular-rational values*. Next, we consider two measures of *emancipative values* and *secular values* from Welzel (2013).

For the group of first-generation locals with two parents born abroad in the same country, the coefficients on the measures of cultural values are listed in Table 9. We find that unconditional on parental characteristics, most child outcomes are strongly correlated with the culture of parental country of origin (Columns 1-4). However, when we consider child outcomes conditional on parental characteristics, the relationship between the culture of parental country of origin and child outcomes is generally much weaker and statistically insignificant (Table 9, Columns 5-8). The results for the crime outcomes are the only exception to this conclusion. For the crime outcomes, we find that culture is related to child outcomes, also when controlling for parental characteristics. But this is also true when considering the number of dropped charges, and in line with the findings in Table 8, it is hard to conclude whether this relationship is in fact driven by higher crime rates or police targeting of children with parental countries of origin with a particular set of cultural values. We conclude that the culture of parental countries of origin are correlated with parental outcomes, but generally, have no independent effect on children beyond the effects on parental socio-economic status.

When considering children with one parent born abroad and one parent born in Denmark, we do not find any systematic relationship between the culture of parental culture of origin and child outcomes, even unconditional on parental characteristics (see Tables OA.23 and OA.24).

In addition to culture, the economic conditions in parental countries of origin could also impact the outcomes of first-generation locals. To examine this relationship further, we estimate Equation 3, but with ln(GDP per capita, 1980) as the dependent variable instead of a measure of culture (data on GDP per capita is from World Bank, 2023; UNdata, 2023). The results from the this exercise is reported in Table OA.25. We find no systematic relationship

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[18]Due to the larger number of countries sampled, we focus on data from the second wave of the value surveys, 1989-1993 (EVS/WVS2). If data on a country are missing, we impute the missing value from the following two waves, 1994-1998 (WVS3) and 1999-2004 (EVS3, WVS4). If data from a specific country are missing in all three waves, the country is excluded from the analysis. Country-level data on the two Inglehart measures and the two Welzel measures are obtained directly from the World Values Survey Association; they construct the measures from EVS (2020) and Inglehart et al. (2014)

between the economic conditions of parental countries of origin and child outcomes.[19]

Lastly, there could be interactions between child gender and parental region of origin, and these effects could also differ depending on whether the mother, the father, or both parents are born in a specific region. In the Online Appendix, Tables OA.26 to OA.37, we present additional heterogeneity analyses along these lines. Unconditionally, there is substantial variation across groups (because the average levels of parental characteristics vary by group). Conditional on parental characteristics, there is some heterogeneity between men and women, and for children with parents from different regions. But the general point remains; most, often all of the apparent disadvantage of first-generation locals can be ascribed to the poor socio-economic background of their parents.[20] We discuss these findings at length in Online Appendix OA.6.

Figure 3 illustrates what we generally find, showing average income by different maternal regions of origin. Those with mothers born in the Middle East (the largest group of first-generation locals and a group often singled out for particular concern) have lower incomes on average, but this can be explained by low parental income and this group is not noticeably off the regression line.

VI   Conclusion

Understanding outcomes for first-generation locals is essential for a full assessment of the impact of immigration, arguably more than the impact of the immigrant parents themselves, as descendants will be around longer than the original immigrants. Popular and political discussions on the outcomes of first-generation locals often centres around whether or not the integration of immigrants and their children has been successful. Concerns about the integration of first-generation locals are often based on the poor economic and educational outcomes for some groups. We show that, unconditionally, first-generation locals in Denmark have lower earnings, lower rates of employment, lower levels of education, and higher levels of criminal convictions (albeit also a higher number of charges which do not lead to a conviction). The unconditional gaps in outcomes between first-generation locals and children

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[19]We have done numerous robustness checks that confirm these results, including: 1) Combining Inglehart's two measures of cultural values in the same regression, both with and without controlling for ln(GDP per capita) of parental country of origin. And repeated this exercise for Welzel's two measures of cultural values. 2) Split the sample into high and low GDP per capita parental countries of origin. We generally find that those with parents from low income countries have higher unconditional gaps in earnings compared to those with parents from high income countries, but, once parental characteristics are controlled for, they outperform or do as well as both those with two local-born parents and those with immigrant parents from higher income countries.

[20]We find no clear patterns in the large number of estimates, some of which may be significant by chance.

of locals are different to the findings from the US where first-generation locals have higher earnings, on average, than those with US-born parents (e.g., Borjas, 1993; Card et al., 2000; Abramitzky et al., 2021).

However, it makes little sense to compare the outcomes of first-generation locals and children of locals unconditionally when their parental backgrounds are very different. Therefore, we propose a unified framework that allows of to consider all relevant child outcomes and to all the parental characteristics that are otherwise considered separately in the existing literature. Importantly, this framework enables comparisons of the relative importance of parental characteristics in explaining gaps in outcomes. In contrast to the existing literature, we do not impose strict functional forms on the child-parent intergenerational relationship. Because of non-linearities in the child-parent rank-rank relationship in income, especially at the bottom of the parental income distribution, the choice of functional form is important. It is particularly important when we consider the outcomes of first-generation locals as their parents generally have lower levels of income relative to local-born parents.

By applying this framework, we show that in Denmark, most differences in outcomes between first-generation locals and children of locals can be explained by parental characteristics, and we show that this result holds across many different outcomes. We also contribute to the literature by showing that is important to consider a wider range of parental characteristics, and not just earnings, when estimating differences in outcomes of first-generation locals and children of locals.

A relatively higher rate of prison sentences amongst first-generation locals, also conditional on parental characteristics, is the main exception to our general conclusion of similar outcomes of first-generation locals and children of locals with similar characteristics. This finding motivated further analysis of criminal charges, and we also find a higher number of charges which do not lead to a conviction amongst first-generation locals conditional on parental characteristics. This suggest that other mechanisms than just higher levels of crime at are play, e.g. police targeting. We highlight that is only because of our unified framework where we consider a wide range of outcomes together that we are able to detect that parental characteristics are relatively less relevant in explaining the difference in rates of prison sentences between first-generation locals and children of locals.

Next, we show that distinguishing between those with two and one immigrant parents is also important. The groups of children with one parent born in Denmark and one parent born abroad are generally different in terms of both parental countries of origin and differences in outcomes. When differences in parental characteristics are not accounted for, the group of children with one immigrant parents generally have better outcomes than those with two immigrant parents. However, when controlling for parental characteristics, we generally

reach the opposite conclusion.

We undertake a number of heterogeneity analyses to check if this conclusion holds across subgroups of first-generation locals. We find that female generation-locals have particularly good conditional outcomes relative to women with two local born parents. We also examine whether cultural values and economic conditions in parental countries of birth matter for the outcomes of first-generation locals. Conditional on parental characteristics, we generally find no relationship between the outcomes of first-generation locals, and the cultural values and economic conditions in parental countries of birth.

Lastly, we explore several income and family dynamics and their effects on our estimated gaps between children of locals and first-generation locals. In terms of child income, we see that our general conclusions hold when we instead consider the probability of exceeding a range of income thresholds. We also consider gaps in outcomes by years from parental immigration at the time of birth as newly arrived immigrants may be less likely to have secured a job that fully reflects their ability and/or human capital. We find that the conditional "overperformance" of children of recent immigrants is particularly striking. When considering family dynamics, we find that conditional on parental characteristics, first-generation local women are less likely to have children early, but remain more likely to marry early. This result suggests that daughters of immigrants may do particularly well because they are less likely to have children early compared to daughters of locals with similar parental characteristics.

Similar to Denmark, first-generation locals often have worse socio-economic outcomes than the children of locals unconditional on parental characteristics in other European countries. Our results suggest that these differences should not simply be interpreted as indicative of lower rates of intergenerational mobility among first-generation locals, nor as something directly related to immigrant status (e.g. language ability). Instead, our analysis suggests that parental characteristics more broadly should to be considered. The existing literature often finds residual gaps in outcomes between first-generation locals and children of locals in European countries, also when conditioning on one or more parental characteristics (see e.g. Heath et al., 2008; OECD, 2017, for overviews). We conclude that these residual gaps are most likely a result of insufficient data on the immigrant parents and the choice of functional form when modelling the child-parent intergenerational relationship. In contrast to the existing literature, we observe the full history of parental income and employment during childhood, as well as parental occupational and educational outcomes, for both parents. With these data at hand, in the Danish setting, we show that first-generation locals generally perform as well as or outperform children of locals conditional on parental characteristics. While we find that children of immigrants are more likely to come from deprived

backgrounds, they do not experience substantially different outcomes from children of locals conditional on parental characteristics.

Although our conditional estimates of differences in outcomes between first-generation locals and children of locals are informative about the relationship between parental immigration status and child outcomes, we cannot interpret these as estimates of the causal effect of having immigrant parents as relevant, but unobserved, parental variables may be correlated with having immigrant parents. For example, it could be that human capital conditional on earnings is higher for immigrant parents due to discrimination or due to differences in institutional knowledge and language skills. Identifying these factors would be a useful topic for further research.

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VII Figures and tables

Table 1: Parental region of birth

Mother's region of birth	Africa	Asia	Denmark	EU-13	EU-15, ex. Nordic	Europe, non-EU	Greenland/ Faroe Is.	Middle East	Nordic	North America	Oceania	South and Mid. America	Total
							Father's region of birth						
Africa	62	8	284	-	-	-	-	12	-	-	-	-	369
Asia	5	923	949	-	16	7	-	33	5	-	-	-	1,946
Denmark	531	588	362,460	304	3,207	1,510	859	1,781	2,376	654	87	367	374,724
EU-13	-	-	531	305	16	32	-	20	6	-	-	-	924
EU-15, ex. Nordic	11	13	1,987	7	156	13	-	20	25	9	-	5	2,248
Europe, non-EU	-	9	847	10	19	841	-	21	14	-	-	-	1,772
Greenland/Faroe Is.	5	-	1,572	-	12	15	112	19	33	7	-	-	1,781
Middle East	14	79	212	-	5	9	-	7,185	6	-	-	-	7,515
Nordic	8	12	3,440	-	53	27	-	53	136	16	-	-	3,755
North America	-	-	742	5	11	-	-	-	8	-	-	-	780
Oceania	-	-	109	-	-	-	-	-	-	-	-	-	112
South and Middle America	-	-	402	-	7	-	-	-	-	-	-	67	491
Total	647	1,642	373,535	640	3,503	2,459	981	9,148	2,614	702	92	454	396,417

Notes: This table shows the parental region of origin for children born in Denmark from 1980-1987. We drop individuals for whom one or both parents are unknown or if parental origin is unknown. We also drop observations of children with missing information on education or if they are not liable to pay taxes in Denmark in the year they turn 30. Please see Appendix OA.1 for more details on the sample. Because of data confidentiality rules at Statistics Denmark, we are not allowed to show the counts in cells with fewer than 5 individuals. However, they remain in the sample, which explains why the sum of the counts in the columns can be smaller than the reported total.

Table 2: Summary statistics

	Non-immigrant	1 parent born outside DK	2 parents born outside DK	>0 parents born in Greenland/Faroe Is.
Female	0.492	0.488	0.498	0.492
Married	0.244	0.208	0.430	0.195
Parent	0.421	0.368	0.470	0.403
Total labour market income (1000 DKK)	268.776	247.479	218.530	214.970
Labour income rank	50.468	46.958	42.035	41.190
Inv. hyp. sine trans., total labour income	5.444	5.154	4.710	4.757
ln(total labour income)	5.435	5.319	5.217	5.158
ln(hourly wage)	5.226	5.229	5.197	5.189
Public transfers/benefits (1000 DKK)	45.481	48.937	59.947	58.791
Unemployed	0.160	0.207	0.279	0.269
Years of education	14.516	14.452	13.685	13.965
Guilty charges	0.670	0.974	1.779	1.257
Any prison	0.055	0.071	0.144	0.093
Charges dropped / not guilty	0.181	0.299	0.771	0.330
Share of charges dropped / not guilty	0.181	0.191	0.258	0.177
Mother				
Labour income during child's first 21 years (1000 DKK)	4475.312	4121.374	1725.892	3378.988
Labour income rank	51.219	46.241	18.113	38.094
Years of education when child aged 21	13.219	13.655	11.620	13.191
Years of unemployment during child's first 21 years	2.696	4.296	9.854	5.289
Father				
Labour income during child's first 21 years (1000 DKK)	7704.955	6649.231	3504.944	5934.641
Labour income rank	51.404	42.475	19.064	38.764
Years of education when child aged 21	13.511	14.056	11.524	13.554
Years of unemployment during child's first 21 years	1.168	2.583	4.858	2.981
N	362460	20908	10399	2650

Notes: This table shows characteristics of children born in Denmark from 1980-1987 in the year they turn 30. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. We drop individuals for whom one or both parents are unknown or if parental origin is unknown. We also drop observations of children with missing information on education or if they are not liable to pay taxes in Denmark in the year they turn 30. Please see Appendix OA.1 for more details on the sample.

Figure 1: Rank-rank relationship between parental and child income
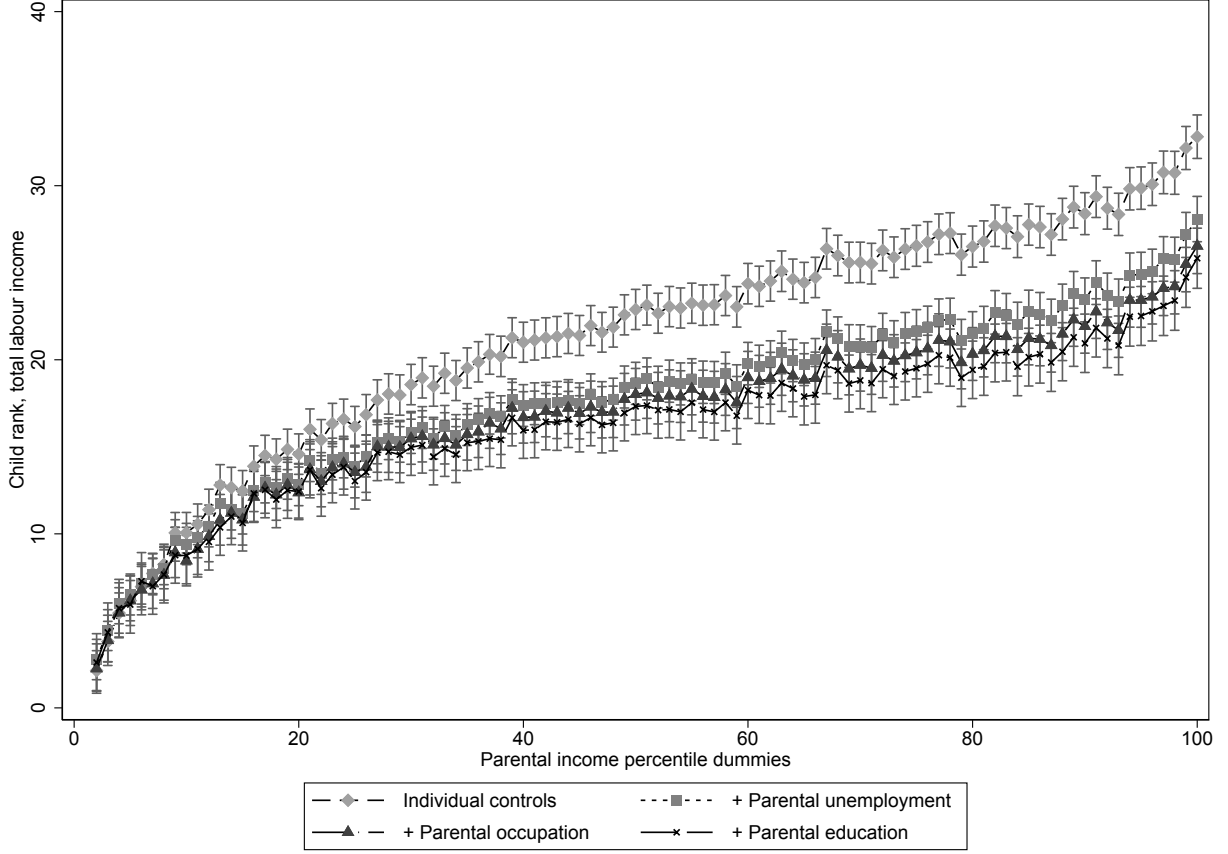
Notes: Parental income is measured as the mother's and father's aggregated income (inflation adjusted, 2013-levels) during the first 21 years of the child's life. The parental income rank is determined from the full set of parents in the sample described in section II. For children, we consider their income in the year they turn 30 in 2013-level, and the rank is similarly determined from the full set of children. The reference group is children of parents in the first parental income percentile. Individual controls: *gender dummy, and 11 home region dummies.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. See Table 3 for sample sizes. 95%-confidence intervals indicated, derived from robust standard errors.

Table 3: Regressions: Earnings

Dependent variable		(1)	(2)	(3)	(4)	(5)	(6)
Total labour income (1000 DKK)	No. of parents born outside DK=2	-50.97	-62.12	10.86	14.82	17.70	22.87
		(1.901)	(1.928)	(1.973)	(1.989)	(2.113)	(4.509)
	No. of parents born outside DK=1	-21.42	-28.98	-10.20	-7.477	-8.242	-9.292
		(1.351)	(1.344)	(1.315)	(1.323)	(1.407)	(1.588)
	Parents from Greenland/Faroe Is.>0	-54.10	-57.24	-28.63	-25.23	-24.39	-24.13
		(3.574)	(3.526)	(3.408)	(3.407)	(3.731)	(4.114)
	Adjusted R^2	0.00311	0.0394	0.0787	0.0806	0.0802	0.0788
	N	396417	396417	396417	396417	368806	347344
Rank total labour income	No. of parents born outside DK=2	-8.546	-10.46	1.790	2.446	2.968	3.691
		(0.300)	(0.303)	(0.312)	(0.314)	(0.333)	(0.667)
	No. of parents born outside DK=1	-3.530	-4.805	-1.636	-1.169	-1.308	-1.400
		(0.211)	(0.208)	(0.204)	(0.205)	(0.219)	(0.249)
	Parents from Greenland/Faroe Is.>0	-9.329	-9.851	-5.065	-4.472	-4.359	-4.334
		(0.559)	(0.551)	(0.531)	(0.530)	(0.581)	(0.657)
	Adjusted R^2	0.00443	0.0583	0.112	0.115	0.116	0.115
	N	396417	396417	396417	396417	368806	347344
Inv. hyp. sine trans., total labour income	No. of parents born outside DK=2	-0.735	-0.826	0.116	0.177	0.209	0.187
		(0.0264)	(0.0267)	(0.0277)	(0.0278)	(0.0295)	(0.0538)
	No. of parents born outside DK=1	-0.289	-0.352	-0.104	-0.0630	-0.0820	-0.0981
		(0.0170)	(0.0169)	(0.0167)	(0.0167)	(0.0177)	(0.0197)
	Parents from Greenland/Faroe Is.>0	-0.689	-0.714	-0.338	-0.284	-0.282	-0.281
		(0.0506)	(0.0503)	(0.0487)	(0.0487)	(0.0519)	(0.0575)
	Adjusted R^2	0.00443	0.0181	0.0672	0.0709	0.0700	0.0676
	N	396417	396417	396417	396417	368806	347344
ln(total labour income)	No. of parents born outside DK=2	-0.219	-0.255	0.0341	0.0537	0.0696	0.0958
		(0.0142)	(0.0143)	(0.0149)	(0.0150)	(0.0158)	(0.0273)
	No. of parents born outside DK=1	-0.116	-0.134	-0.0609	-0.0476	-0.0468	-0.0438
		(0.00920)	(0.00919)	(0.00917)	(0.00920)	(0.00968)	(0.0107)
	Parents from Greenland/Faroe Is.>0	-0.278	-0.286	-0.182	-0.165	-0.159	-0.138
		(0.0303)	(0.0302)	(0.0299)	(0.0299)	(0.0320)	(0.0345)
	Adjusted R^2	0.00241	0.0160	0.0342	0.0357	0.0366	0.0364
	N	350598	350598	350598	350598	327684	310258
ln(hourly wage)	No. of parents born outside DK=2	-0.0222	-0.0446	0.0295	0.0304	0.0369	0.0541
		(0.00343)	(0.00343)	(0.00355)	(0.00356)	(0.00376)	(0.00741)
	No. of parents born outside DK=1	0.00395	-0.0140	0.00215	0.00273	0.00277	0.00168
		(0.00231)	(0.00224)	(0.00222)	(0.00222)	(0.00235)	(0.00262)
	Parents from Greenland/Faroe Is.>0	-0.0338	-0.0425	-0.0177	-0.0171	-0.0201	-0.0212
		(0.00648)	(0.00629)	(0.00615)	(0.00615)	(0.00655)	(0.00715)
	Adjusted R^2	0.00315	0.0853	0.117	0.117	0.122	0.125
	N	337799	337799	337799	337799	315829	299257
Individual controls		No	Yes	Yes	Yes	Yes	Yes
Parental income		No	No	Yes	Yes	Yes	Yes
Parental unemployment		No	No	No	Yes	Yes	Yes
Parental occupation		No	No	No	No	Yes	Yes
Parental education		No	No	No	No	No	Yes

Notes: The table shows the estimated differences in outcomes between the three groups of first-generation locals and the children of two local-born parents, i.e. the coefficients β_1^1, β_1^2, and β_1^3 from Equation 1. Individual controls: *gender dummy, and 11 home region dummies.* Parental income: *percentile dummies for mother's and father's income during the first 21 years of the child's life.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. For the regressions of ln(hourly wages), observations are weighted by full-time equivalents, number of hours worked / 1,923.96. Statistics Denmark defines 1,923.96 hours of work per year as full-time employment. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. Robust standard errors in parentheses.

Table 4: Regressions: Transfers, unemployment and education

Dependent variable		(1)	(2)	(3)	(4)	(5)	(6)
Transfers (1000 DKK)	No. of parents born outside DK=2	14.59	18.35	-6.543	-7.752	-8.598	-9.347
		(0.728)	(0.715)	(0.743)	(0.748)	(0.792)	(1.411)
	No. of parents born outside DK=1	3.474	6.495	-0.00160	-0.943	-0.303	0.884
		(0.467)	(0.451)	(0.448)	(0.449)	(0.474)	(0.529)
	Parents from Greenland/Faroe Is.>0	13.38	14.63	4.714	3.440	4.315	4.242
		(1.360)	(1.306)	(1.273)	(1.275)	(1.376)	(1.500)
	Adjusted R^2	0.00189	0.0794	0.121	0.123	0.124	0.124
Unemployed=1	No. of parents born outside DK=2	0.118	0.123	0.00134	-0.00942	-0.0134	-0.0183
		(0.00444)	(0.00448)	(0.00463)	(0.00467)	(0.00493)	(0.00896)
	No. of parents born outside DK=1	0.0474	0.0511	0.0186	0.0118	0.0133	0.0134
		(0.00287)	(0.00287)	(0.00285)	(0.00286)	(0.00302)	(0.00336)
	Parents from Greenland/Faroe Is.>0	0.109	0.110	0.0621	0.0535	0.0487	0.0477
		(0.00863)	(0.00860)	(0.00840)	(0.00838)	(0.00895)	(0.00990)
	Adjusted R^2	0.00442	0.00974	0.0393	0.0429	0.0424	0.0398
Years of education	No. of parents born outside DK=2	-0.868	-1.045	0.412	0.462	0.633	0.831
		(0.0271)	(0.0272)	(0.0277)	(0.0279)	(0.0292)	(0.0553)
	No. of parents born outside DK=1	-0.0813	-0.280	0.0869	0.121	0.0645	-0.0214
		(0.0188)	(0.0181)	(0.0173)	(0.0174)	(0.0181)	(0.0200)
	Parents from Greenland/Faroe Is.>0	-0.577	-0.657	-0.0897	-0.0450	-0.139	-0.157
		(0.0516)	(0.0491)	(0.0461)	(0.0461)	(0.0483)	(0.0538)
	Adjusted R^2	0.00412	0.0828	0.191	0.194	0.218	0.234
N		396417	396417	396417	396417	368806	347344
Individual controls		No	Yes	Yes	Yes	Yes	Yes
Parental income		No	No	Yes	Yes	Yes	Yes
Parental unemployment		No	No	No	Yes	Yes	Yes
Parental occupation		No	No	No	No	Yes	Yes
Parental education		No	No	No	No	No	Yes

Notes: The table shows the estimated differences in outcomes between the three groups of first-generation locals and the children of two local-born parents, i.e. the coefficients β_1^1, β_1^2, and β_1^3 from Equation 1. Individual controls: *gender dummy, and 11 home region dummies.* Parental income: *percentile dummies for mother's and father's income during the first 21 years of the child's life.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. Robust standard errors in parentheses.

Table 5: Regressions: Interactions with the criminal justice system

| Dependent variable		(1)	(2)	(3)	(4)	(5)	(6)
Guilty charges	No. of parents born outside DK=2	1.110	1.135	0.171	0.0682	0.0266	-0.114
		(0.0648)	(0.0643)	(0.0677)	(0.0685)	(0.0709)	(0.0920)
	No. of parents born outside DK=1	0.305	0.339	0.0639	0.00498	0.0252	0.00248
		(0.0327)	(0.0325)	(0.0323)	(0.0325)	(0.0325)	(0.0308)
	Parents from Greenland/Faroe Is.>0	0.588	0.602	0.190	0.114	0.207	0.347
		(0.108)	(0.107)	(0.106)	(0.107)	(0.116)	(0.129)
	Adjusted R^2	0.00204	0.0200	0.0355	0.0381	0.0376	0.0352
	N	396417	396417	396417	396417	368806	347344
Any prison	No. of parents born outside DK=2	0.0885	0.0921	0.0332	0.0275	0.0215	0.0124
		(0.00347)	(0.00338)	(0.00348)	(0.00350)	(0.00367)	(0.00633)
	No. of parents born outside DK=1	0.0158	0.0199	0.00333	-0.0000788	0.00160	0.00253
		(0.00182)	(0.00178)	(0.00178)	(0.00178)	(0.00185)	(0.00198)
	Parents from Greenland/Faroe Is.>0	0.0378	0.0395	0.0154	0.0110	0.0149	0.0281
		(0.00566)	(0.00551)	(0.00545)	(0.00544)	(0.00582)	(0.00662)
	Adjusted R^2	0.00416	0.0448	0.0635	0.0658	0.0658	0.0632
	N	396417	396417	396417	396417	368806	347344
Charges dropped / not guilty	No. of parents born outside DK=2	0.590	0.593	0.297	0.267	0.247	0.138
		(0.0328)	(0.0328)	(0.0330)	(0.0331)	(0.0336)	(0.0497)
	No. of parents born outside DK=1	0.119	0.126	0.0439	0.0269	0.0327	0.00972
		(0.0147)	(0.0147)	(0.0145)	(0.0145)	(0.0149)	(0.0122)
	Parents from Greenland/Faroe Is.>0	0.149	0.153	0.0288	0.00678	0.0336	0.0847
		(0.0432)	(0.0430)	(0.0432)	(0.0431)	(0.0482)	(0.0572)
	Adjusted R^2	0.00335	0.0129	0.0219	0.0236	0.0236	0.0199
	N	396417	396417	396417	396417	368806	347344
Share of charges dropped / not guilty	No. of parents born outside DK=2	0.0780	0.0784	0.0646	0.0633	0.0617	0.0503
		(0.00566)	(0.00577)	(0.00605)	(0.00608)	(0.00657)	(0.0137)
	No. of parents born outside DK=1	0.0104	0.0120	0.00767	0.00704	0.00580	0.00498
		(0.00476)	(0.00478)	(0.00482)	(0.00483)	(0.00529)	(0.00636)
	Parents from Greenland/Faroe Is.>0	-0.00332	-0.00316	-0.0101	-0.0114	-0.0146	-0.0197
		(0.0113)	(0.0113)	(0.0113)	(0.0113)	(0.0127)	(0.0140)
	Adjusted R^2	0.00346	0.00416	0.00534	0.00535	0.00591	0.00391
	N	70634	70634	70634	70634	63867	57637
Individual controls		No	Yes	Yes	Yes	Yes	Yes
Parental income		No	No	Yes	Yes	Yes	Yes
Parental unemployment		No	No	No	Yes	Yes	Yes
Parental occupation		No	No	No	No	Yes	Yes
Parental education		No	No	No	No	No	Yes

Notes: The table shows the estimated differences in outcomes between the three groups of first-generation locals and the children of two local-born parents, i.e. the coefficients β_1^1, β_1^2, and β_1^3 from Equation 1. Individual controls: *gender dummy, and 11 home region dummies.* Parental income: *percentile dummies for mother's and father's income during the first 21 years of the child's life.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. Robust standard errors in parentheses.

Figure 2: Children's mean income rank by parental income rank
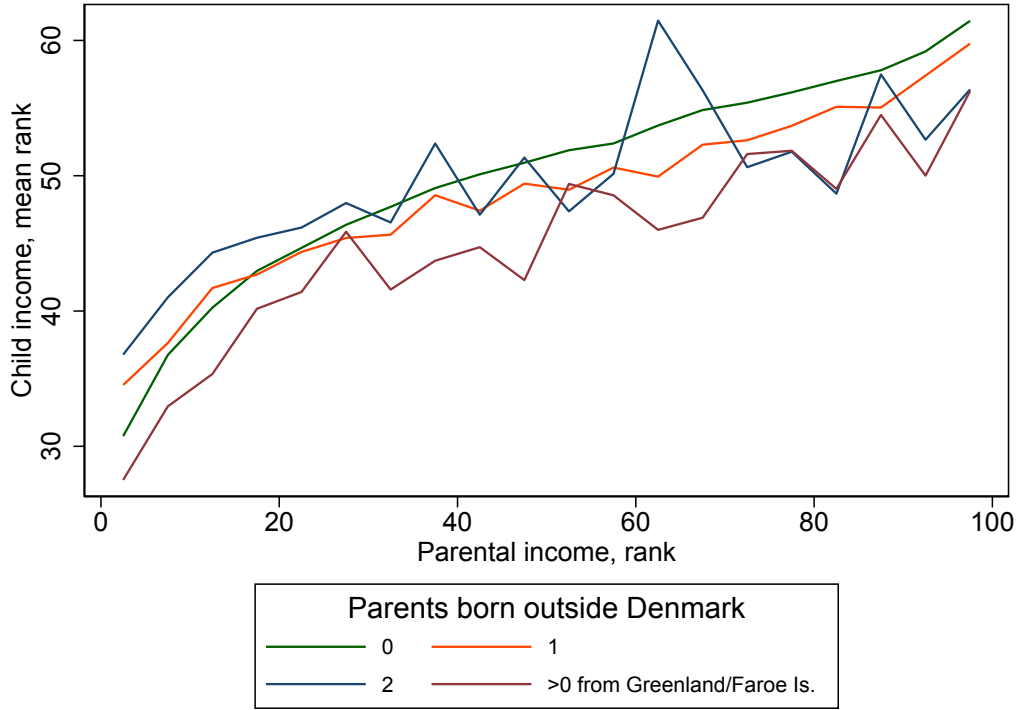
Notes: We split the sample into ventiles by parental income rank, and mean child income rank calculated for each ventile, separately for each parental origin group. For children, we consider their income in the year they turn 30 in 2013-level, and the rank is similarly determined from the full set of children. For parents, we consider the aggregate labour market income during the 21st years of the child's life in 2013-level. The parental income ranks are determined across the entire sample, i.e. across years and parental origins. See Table 2 for sample sizes.

Table 6: Oaxaca-Blinder decompositions: 2 vs. 0 parent born outside Denmark

	(1) Total labour income†	(2) Rank labour income	(3) Inv. hyp. sine trans., total labour income	(4) ln(total labour income)	(5) ln(hourly wage), all jobs	(6) Public transfers/ benefits†	(7) Unemployed	(8) Years of education	(9) Guilty charges	(10) Any prison	(11) Charges dropped / not guilty	(12) Share of charges dropped / not guilty
2 parents born outside DK	218.5	42.03	4.710	5.217	5.220	59.95	0.279	13.68	1.779	0.144	0.771	0.258
	(1.886)	(0.299)	(0.0265)	(0.0142)	(0.00342)	(0.729)	(0.00445)	(0.0265)	(0.0653)	(0.00349)	(0.0331)	(0.00571)
0 parents born outside DK	268.8	50.47	5.444	5.435	5.240	45.48	0.160	14.52	0.670	0.0553	0.181	0.181
	(0.338)	(0.0477)	(0.00365)	(0.00192)	(0.000495)	(0.107)	(0.000608)	(0.00405)	(0.00685)	(0.000380)	(0.00261)	(0.00127)
Difference	-50.25	-8.434	-0.735	-0.218	-0.0200	14.47	0.119	-0.832	1.109	0.0890	0.590	0.0770
	(1.916)	(0.303)	(0.0267)	(0.0144)	(0.00345)	(0.736)	(0.00449)	(0.0268)	(0.0657)	(0.00351)	(0.0332)	(0.00585)
Total explained	-67.14	-11.21	-0.943	-0.274	-0.0508	23.24	0.131	-1.220	1.044	0.0620	0.307	0.0124
	(0.860)	(0.136)	(0.0123)	(0.00625)	(0.00143)	(0.348)	(0.00193)	(0.0139)	(0.0295)	(0.00131)	(0.0110)	(0.00265)
- Individual charac.	7.159	1.272	0.0534	0.0251	0.0174	-2.680	0.000224	0.161	0.00845	0.000102	0.00804	-0.000406
	(0.340)	(0.0536)	(0.00394)	(0.00202)	(0.000649)	(0.123)	(0.000649)	(0.00757)	(0.00742)	(0.000446)	(0.00311)	(0.00131)
- Parental charac.	-74.29	-12.48	-0.996	-0.300	-0.0682	25.92	0.131	-1.381	1.036	0.0619	0.299	0.0128
	(0.777)	(0.123)	(0.0116)	(0.00599)	(0.00126)	(0.323)	(0.00181)	(0.0114)	(0.0291)	(0.00123)	(0.0106)	(0.00224)
Total unexplained	16.89	2.773	0.208	0.0568	0.0308	-8.775	-0.0119	0.389	0.0651	0.0271	0.283	0.0646
	(2.021)	(0.321)	(0.0288)	(0.0156)	(0.00367)	(0.796)	(0.00483)	(0.0279)	(0.0726)	(0.00375)	(0.0352)	(0.00639)
Observations	372,859	372,859	372,859	330,507	318,567	372,859	372,859	372,859	372,859	372,859	372,859	65,312

Notes: Coefficients of children with 0 parents born outside Denmark used as reference level. † indicates 1000 DKK, 2013-levels. Individual characteristics: *gender dummy, and 11 home region dummies.* Parental characteristics: *percentile dummies for mother's and father's income during the first 21 years of the child's life, dummies for years of unemployment for mother and father during the first 21 years of the child's life.* All parental characteristics are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. For the regressions of ln(hourly wages), observations are weighted by full-time equivalents, number of hours worked / 1,923.96. Statistics Denmark defines 1,923.96 hours of work per year as full-time employment. Robust standard errors in parentheses.

Table 7: Regressions: Earnings, by gender

	Total labour income (1000 DKK)		Rank total labour income		IHS trans., total labour income		ln(total labour income)		ln(hourly wage)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Women										
No. of parents born outside DK=2	-35.21	30.70	-5.734	5.272	-0.648	0.271	-0.171	0.105	0.000684	0.0531
	(2.506)	(2.592)	(0.394)	(0.404)	(0.0373)	(0.0384)	(0.0202)	(0.0207)	(0.00459)	(0.00467)
No. of parents born outside DK=1	-14.52	-0.323	-2.069	0.333	-0.238	-0.00982	-0.0942	-0.0253	0.0162	0.0153
	(1.673)	(1.629)	(0.278)	(0.270)	(0.0244)	(0.0239)	(0.0131)	(0.0130)	(0.00299)	(0.00286)
Parents from Greenland/Faroe Is.>0	-43.47	-14.05	-7.368	-2.413	-0.620	-0.208	-0.214	-0.0988	-0.0186	0.00104
	(4.383)	(4.191)	(0.722)	(0.687)	(0.0718)	(0.0692)	(0.0394)	(0.0388)	(0.00789)	(0.00735)
Men										
No. of parents born outside DK=2	-65.73	-0.831	-11.18	-0.341	-0.816	0.0845	-0.261	0.00409	-0.0395	0.00943
	(2.821)	(2.844)	(0.446)	(0.453)	(0.0373)	(0.0380)	(0.0198)	(0.0204)	(0.00495)	(0.00506)
No. of parents born outside DK=1	-28.44	-14.30	-4.999	-2.603	-0.341	-0.114	-0.136	-0.0683	-0.00676	-0.00824
	(2.066)	(2.038)	(0.309)	(0.303)	(0.0236)	(0.0232)	(0.0129)	(0.0128)	(0.00337)	(0.00329)
Parents from Greenland/Faroe Is.>0	-64.30	-36.06	-11.21	-6.467	-0.755	-0.358	-0.336	-0.228	-0.0466	-0.0331
	(5.540)	(5.313)	(0.837)	(0.800)	(0.0712)	(0.0682)	(0.0455)	(0.0448)	(0.00977)	(0.00956)
Adjusted R^2	0.0292	0.0808	0.0442	0.115	0.0114	0.0710	0.0132	0.0358	0.0524	0.118
N	396417	396417	396417	396417	396417	396417	350598	350598	337799	337799
Individual controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental income	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental unemployment	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental occupation	No	No	No	No	No	No	No	No	No	No
Parental education	No	No	No	No	No	No	No	No	No	No

Notes: For women/men: Reference group is children of the same gender, but of parents born in Denmark. Individual controls: *gender dummy, and 11 home region dummies.* Parental income: *percentile dummies for mother's and father's income during the first 21 years of the child's life.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. For the regressions of ln(hourly wages), observations are weighted by full-time equivalents, number of hours worked / 1,923.96. Statistics Denmark defines 1,923.96 hours of work per year as full-time employment. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. Robust standard errors in parentheses.

Table 8: Regressions: Other outcomes, by gender

|	Transfers (1000 DKK)		Unemployed=1		Years of education		Guilty charges		Any prison		Charges dropped/ not guilty		Share of charges dropped/ not guilty	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Women														
No. of parents born outside DK=2	14.42	-7.939	0.116	-0.0126	-0.703	0.643	0.132	-0.935	0.0142	-0.0484	0.0377	-0.294	-0.00391	-0.0159
	(1.092)	(1.106)	(0.00643)	(0.00658)	(0.0376)	(0.0383)	(0.0215)	(0.0347)	(0.00228)	(0.00260)	(0.00842)	(0.0140)	(0.0128)	(0.0129)
No. of parents born outside DK=1	2.605	-1.950	0.0444	0.00881	-0.0444	0.157	0.0856	-0.213	0.00524	-0.0104	0.0238	-0.0681	0.00962	0.00692
	(0.717)	(0.697)	(0.00424)	(0.00419)	(0.0265)	(0.0246)	(0.0168)	(0.0194)	(0.00134)	(0.00140)	(0.00580)	(0.00681)	(0.0111)	(0.0112)
Parents from Greenland/Faroe Is.>0	12.88	2.645	0.108	0.0516	-0.521	0.0323	0.237	-0.246	0.0172	-0.0101	0.0735	-0.0721	-0.0200	-0.0279
	(2.029)	(1.929)	(0.0126)	(0.0123)	(0.0727)	(0.0655)	(0.0536)	(0.0561)	(0.00472)	(0.00470)	(0.0247)	(0.0254)	(0.0227)	(0.0225)
Men														
No. of parents born outside DK=2	14.35	-7.568	0.120	-0.00631	-1.038	0.282	2.091	1.058	0.163	0.103	1.141	0.820	0.101	0.0856
	(0.909)	(0.941)	(0.00611)	(0.00624)	(0.0380)	(0.0382)	(0.124)	(0.126)	(0.00611)	(0.00614)	(0.0633)	(0.0628)	(0.00625)	(0.00665)
No. of parents born outside DK=1	4.509	0.0200	0.0505	0.0146	-0.113	0.0870	0.508	0.213	0.0254	0.00977	0.207	0.117	0.0103	0.00703
	(0.567)	(0.562)	(0.00386)	(0.00385)	(0.0262)	(0.0243)	(0.0611)	(0.0603)	(0.00324)	(0.00319)	(0.0281)	(0.0276)	(0.00520)	(0.00527)
Parents from Greenland/Faroe Is.>0	13.80	4.213	0.110	0.0553	-0.633	-0.120	0.930	0.463	0.0579	0.0315	0.224	0.0828	0.00192	-0.00559
	(1.713)	(1.669)	(0.0118)	(0.0114)	(0.0721)	(0.0647)	(0.204)	(0.202)	(0.00988)	(0.00967)	(0.0813)	(0.0811)	(0.0130)	(0.0130)
Adjusted R^2	0.0641	0.123	0.00801	0.0429	0.0174	0.194	0.0202	0.0396	0.0429	0.0685	0.0152	0.0265	0.00433	0.00611
N	396417	396417	396417	396417	396417	396417	396417	396417	396417	396417	396417	396417	70634	70634
Individual controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental income	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental unemployment	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Parental occupation	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Parental education	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Notes: For women/men: Reference group is children of the same gender, but of parents born in Denmark. Individual controls: *gender dummy, and 11 home region dummies.* Parental income: *percentile dummies for mother's and father's income during the first 21 years of the child's life.* Parental unemployment: *dummies for years of unemployment for mother and father during the first 21 years of the child's life.* Parental occupation: *mother's and father's 2-digit ISCO88 codes when child is 21 years old, with added categories for retirement, unemployment, or unknown occupation.* Parental education: *dummies for years of education of mother and father when child is 21 years old.* All parental controls are included separately for mothers and fathers, i.e. they are not summed. Cohort-year fixed effects are included in all specifications. All measures of income, earnings, and transfers are inflation-adjusted to 2013-levels. Robust standard errors in parentheses.

Table 9: Culture and the relationship to country effects
Father and mother born abroad, same country

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Inglehart: survival vs. self-expression values	Inglehart: traditional vs. secular-rational values	Welzel: emancipative values	Welzel: secular values	Inglehart: survival vs. self-expression values	Inglehart: traditional vs. secular-rational values	Welzel: emancipative values	Welzel: secular values
Total labour income (1000 DKK)	22.079	22.422	185.670	178.294	9.401	3.301	44.445	−6.234
	(6.726)	(9.331)	(59.668)	(56.074)	(7.247)	(9.586)	(63.898)	(63.340)
Rank total labour income	3.829	4.020	31.880	31.946	1.754	0.895	9.282	1.593
	(1.155)	(1.607)	(10.052)	(9.359)	(1.211)	(1.624)	(10.587)	(10.537)
IHS trans., total labour income	0.354	0.399	3.278	3.065	0.161	0.104	1.099	0.486
	(0.085)	(0.129)	(0.806)	(0.765)	(0.078)	(0.113)	(0.714)	(0.736)
ln(total labour income)	0.081	0.097	0.938	1.057	0.032	0.005	0.278	0.283
	(0.036)	(0.049)	(0.422)	(0.356)	(0.041)	(0.055)	(0.425)	(0.398)
ln(hourly wage)	0.015	0.011	−0.019	0.065	0.003	−0.006	−0.154	−0.139
	(0.016)	(0.020)	(0.131)	(0.132)	(0.017)	(0.022)	(0.145)	(0.139)
Transfers (1000 DKK)	−6.471	−5.879	−52.278	−71.718	−2.203	0.827	−4.806	−6.663
	(3.307)	(4.445)	(31.628)	(28.056)	(2.987)	(3.873)	(26.612)	(25.784)
Unemployed=1	−0.050	−0.062	−0.507	−0.474	−0.023	−0.021	−0.206	−0.131
	(0.014)	(0.019)	(0.123)	(0.115)	(0.012)	(0.017)	(0.106)	(0.108)
Years of education	0.296	0.317	1.271	2.902	−0.010	−0.073	−1.340	−1.117
	(0.203)	(0.263)	(1.706)	(1.622)	(0.198)	(0.252)	(1.709)	(1.647)
Guilty charges	−0.497	−0.669	−4.992	−5.829	−0.364	−0.286	−2.633	−2.933
	(0.084)	(0.146)	(0.980)	(1.125)	(0.126)	(0.158)	(1.408)	(1.354)
Any prison	−0.045	−0.070	−0.374	−0.572	−0.030	−0.030	−0.341	−0.334
	(0.005)	(0.011)	(0.101)	(0.083)	(0.007)	(0.012)	(0.097)	(0.092)
Charges dropped/not guilty	−0.224	−0.237	−2.142	−2.858	−0.157	−0.145	−1.378	−1.580
	(0.056)	(0.068)	(0.936)	(0.691)	(0.050)	(0.063)	(0.681)	(0.622)
Share of charges dropped/not guilty	−0.015	−0.021	−0.250	−0.518	−0.013	−0.019	−0.252	−0.481
	(0.037)	(0.059)	(0.262)	(0.249)	(0.037)	(0.060)	(0.273)	(0.265)
Controls	No	No	No	No	Yes	Yes	Yes	Yes

Notes: For each outcome, we do the following exercise: 1) Estimate Equation 1 with parental country of origin indicators instead of group indicators d_i^j. In this table, we only consider children with two parents born abroad in the same country and children of two local-born parents. The reference group are children with two local-born parents. 2) Extract the coefficients on the country indicators and use those as the dependent variable in the next regression. 3) Regress the extracted coefficients on the country indicators on each of the four measures of cultural values separately. We weight each observation inversely to the standard error of the estimate coefficient on the country indicator. 4) We report the coefficients on the measures of cultural values here. We focus on our two preferred specifications: 1) the unadjusted gaps (Controls="No"), and 2) the gaps after including individual controls and controls for parental income and unemployment (Controls="Yes"). This corresponds to the specifications from Columns 1 and 4 in Tables 3 to 5. Parental origin countries with less than 10 child observations are dropped to data confidentiality rules from Statistics Denmark. See Table OA.22 for number of parental country of origin observations and R^2 for each regression.

Figure 3: Average income rank by mother's region of birth
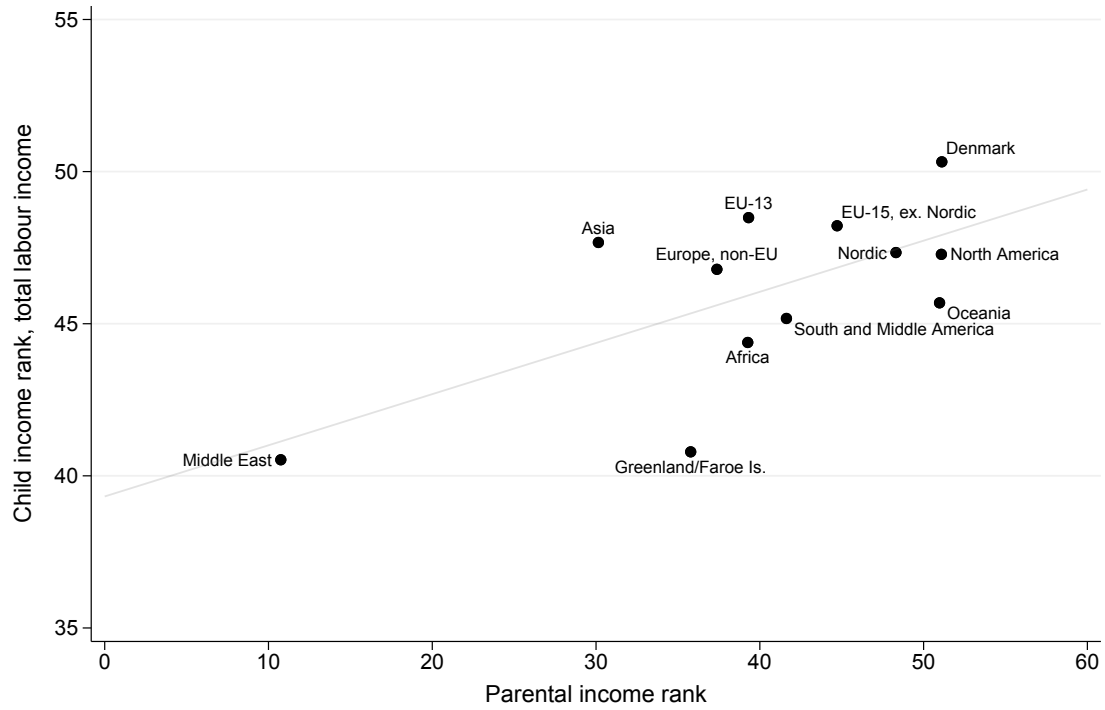
Notes: Parental income is measured as the mother's and father's aggregated income (inflation adjusted, 2013-levels) during the first 21 years of the child's life. The parental income rank is determined from the full set of parents in the sample described in section II. For children, we consider their income in the year they turn 30 in 2013-level, and the rank is similarly determined from the full set of children. See Table 2 for sample sizes.