Randomized to Opportunity: Measuring Place Effects for Refugee Children*

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Abstract

Area measures of social mobility are increasingly influential in informing place-based policies. We study these measures for a vulnerable population: refugee children randomly assigned to municipalities through Denmark's 1986–1998 refugee dispersal policy. We focus on pre-determined measures of economic opportunity available when children arrive and validate them with a mover-exposure design among locals. Using a wide range of outcomes available in Danish registry data, we find that refugee children assigned to higher-opportunity areas have better long-run outcomes in the labor market, criminal justice involvement, teen motherhood, and modestly better educational attainment. We also test whether social mobility is particularly influential relative to other area characteristics and find that area-level *inequality* is an even stronger predictor of child outcomes. The findings suggest that social mobility measures in the areas where children grow up meaningfully predict their long-term wellbeing.

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Results are stable but paper is preliminary; comments welcome.

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1 Introduction

The global refugee population has reached unprecedented levels, with 2023 marking a historic peak (UNHCR, 2024). Children are particularly affected: although they comprise roughly 30 percent of the world's population, they account for 41 percent of all refugees, and more than 1.9 million children were born into refugee status between 2018 and 2022 (UNHCR, 2024). Refugees, who are forced to flee their countries due to persecution, conflict, or violence, differ from economic migrants, who typically relocate voluntarily and are admitted through selective criteria such as education, language skills, and work experience. Once refugees gain admission to a host country, a central policy question is where they should be settled and, relatedly, how they can be economically integrated (Arendt et al., 2022; Boustan et al., 2025; Foged et al., 2024a).

In parallel, a large and growing literature emphasizes that where children grow up is a key determinant of their adult well-being. Work on intergenerational mobility documents substantial geographic heterogeneity in children's long-run outcomes, and recent research using both randomized housing-mobility experiments, most notably the Moving to Opportunity (MTO) experiment, and mover-based research designs shows that moving low-income families with young children to higher-opportunity areas raises their educational attainment and earnings in adulthood (Chetty & Hendren, 2018a, 2018b; Chetty et al., 2016, 2026a). These findings have spurred a broader policy agenda organized around creating "moves to opportunity," with mobility programs and opportunity maps being used as tools to reduce spatial inequality (Chyn & Daruich, 2025; Chyn & Katz, 2021). This interest in place effects highlights location as a policy-relevant input into human capital production, and motivates thinking about residential assignment policies—such as refugee dispersal rules—as implicit levers for shaping children's long-run outcomes.

Rigorous evidence on place effects among refugees remains limited for at least two reasons. First, data on refugees and their children are scarce. Immigration status and admission class are typically missing from administrative datasets, and studying long-run integration requires outcome measures that extend far enough to capture the economic trajectories of refugee children. Second, refugees often self-select into particular locations within host countries, and settlement choices may be correlated with unobserved determinants of socioeconomic status, complicating causal inference.

This paper aims to overcome these challenges by exploiting the quasi-random assignment of refugees to Danish municipalities to examine how local characteristics influence a broad set of outcomes for children. From 1986 to 1998, refugee families were assigned quasi-randomly across municipalities, providing plausibly exogenous variation in area exposure (Damm & Dustmann, 2014; Foged et al., 2024a). We use administrative records for these refugees and their families matched to nationwide registers over the period 1986–2022 to study impacts on a wide range of outcomes including educational attain-

ment, employment, earnings, criminal justice involvement, foster care placement, teen motherhood, and marriage.

The paper makes four main contributions. First, by measuring economic opportunity among the local population in Denmark, we add to a growing cross-country literature on the role of place in intergenerational mobility. Prior studies document substantial geographic variation in social mobility in the United States (Chetty & Hendren, 2018a, 2018b), Australia (Deutscher, 2020), Canada (Laliberté, 2021), and the Netherlands (Beekers, 2024). This literature also highlights disparities across racial and ethnic groups, with minorities more likely to reside in high-poverty, low-opportunity areas (Chetty et al., 2025). Evidence from experimental studies (Chetty et al., 2016), as well as observational analyses using mover designs to estimate area effects (e.g., Beekers, 2024; Chetty & Hendren, 2018a, 2018b; Chetty et al., 2026a), suggests that where children grow up has a considerable causal effect on their long-run socioeconomic status. We extend this literature by constructing comparable estimates for Denmark. Prior research in Denmark suggests that part of the neighborhood influence is related to neighborhood selection (Cholli et al., 2024b; Eshaghnia, 2023; Heckman & Landersø, 2022). This paper uses a causal framework to test whether variation in social mobility among locals predicts long-term outcomes for refugees.

Second, we add to the literature on refugee integration, including work on dispersal policies, by focusing on refugee children. Prior related work has concentrated mainly on adults, with growing calls for more research on child outcomes (Bahar et al., forthcoming). In particular, the Danish dispersal policy we study has previously shown that local labor market conditions at arrival affect refugee employment (Foged et al., 2024a), and that local crime rates predict criminal behavior among refugee youth (Damm & Dustmann, 2014; Dustmann et al., 2023). Our paper shifts attention to the role of social mobility in shaping the long-run outcomes of refugee children. We find that economic opportunity is an independent—and even stronger—predictor of labor market and crime outcomes than local employment and crime rates themselves.

An innovation in our setting is that we consider both "Realized Opportunity," defined as local intergenerational mobility among permanent residents measured in the year of arrival, and "Ongoing Opportunity," measured among locals in the same birth cohort. Realized Opportunity is predetermined and could, in principle, be used in dispersal decisions. Ongoing Opportunity allows us to capture contemporaneous opportunity and to draw more direct comparisons with the existing literature.

Third, we investigate the role of other area characteristics in shaping child outcomes in order to improve our understanding of the types of places that generate greater social mobility. We "horse-race" the effects of growing up in areas that differ in opportunity against other plausible, policy-relevant determinants of long-run outcomes. These characteristics include human capital, labor market conditions, social networks captured by the

presence of co-nationals in the same area, and local outcome measures such as earnings, poverty, and crime rates at the time of arrival.

Finally, we examine parental success as a potential channel through which place improves the outcomes of refugee children. This contributes to the broader literature on the role of place in adult-refugee integration. Our estimates provide new evidence on how area-level opportunity translates into better outcomes for this vulnerable adult population.

In terms of results, we begin by documenting substantial variation in social mobility across municipalities among the more than five million local residents in Denmark. Compared to the United States, the relationship between parent and child income ranks exhibits higher mobility, as might be expected given a stronger social safety net, but parental income rank still predicts child income rank in ways that vary substantially across space. We validate the social-mobility correlation using the mover-exposure design, comparing siblings who realize different levels of exposure to places based on their age at the time of the move (Chetty & Hendren, 2018a, 2018b): those who move to higher-opportunity areas at earlier ages have higher incomes as adults compared to their older siblings.

We then turn to the refugee sample and ask whether such opportunity extends to newly arrived refugees. We find that among refugee children who were quasi-randomly assigned to higher-opportunity municipalities, where they grow up matters for their longer-term outcomes. Going from a low-opportunity to a high-opportunity area—represented by a two-standard-deviation increase in Realized Opportunity—raises refugee children's income rank at ages 26–30 by about 7 percent. The same increase in Realized Opportunity leads to a 4.2-percentage-point higher probability of employment at age 26. We also find suggestive improvements in educational attainment, particularly an increased likelihood of obtaining a vocational degree, and sizable reductions in adverse outcomes: the number of criminal convictions by age 30 falls by about 14 percent, mainly through property crime, and the risks of foster care placement and teenage motherhood fall by 15–20 percent. The broad set of long-term outcomes moving in the same direction indicates that where refugee children grow up likely has economically meaningful effects on their overall wellbeing.

Next, we show that Realized Opportunity is correlated with employment, earnings, poverty, and inequality, and in horse-race specifications it remains a robust predictor of children's adult income. In particular, local inequlity—measured by the Gini coefficient—is the strongest predictor of child outcomes, providing novel evidence that inequality itself is an important driver of outcomes for vulnerable children. We also find that a two-standard-deviation increase in Realized Opportunity raises parents' income rank by about two percentile points, consistent with a channel operating through improved economic integration of adults. Heterogeneity analyses reveal that effects on crime and

foster care placements are concentrated among boys and children of less-educated parents, while gains in income are somewhat larger for girls and for children of more-educated parents. Taken together, these findings provide evidence that local social mobility plays a powerful role in shaping long-run outcomes for refugees and their children.

The remainder of the paper is organized as follows. Section 2 provides background information on the related literature and the Danish dispersal policy. Section 3 describes the data and empirical strategy. Section 4 reports the measurement of opportunity in Denmark. Section 5 reports the estimated impacts for refugee children and explores potential mechanisms. Section 6 concludes.

2 Background

2.1 Literature

2.1.1 Geographic Variation in Economic Opportunity

A central question in the intergenerational mobility literature is whether place causally affects children's long-run outcomes, or whether neighborhood differences simply reflect family selection. Since families sort across neighborhoods on both observed and unobserved determinants of child outcomes, credible identification requires plausibly exogenous variation in neighborhood exposure. Chyn and Katz (2021) frame the recent literature around this distinction, emphasizing that neighborhood effects for adults may differ from developmental exposure effects for children. Descriptive evidence already points to large geographic differences in opportunity. Using U.S. administrative data, Chetty et al. (2014, 2026b) document substantial variation in mobility across local areas, suggesting that place may matter importantly for upward mobility.

The most influential experimental evidence on the causal effects of neighborhoods comes from Moving to Opportunity for Fair Housing (MTO), which randomized housing vouchers that induced moves from high-poverty to lower-poverty neighborhoods in five major US cities in the 1990s. Early evaluations found limited effects on adult economic self-sufficiency, although some gains in safety and well-being were observed (Kling et al., 2007). The effects on youth crime also differed by gender: girls experienced reductions in violent and property crime, whereas the effects for boys were more mixed, with short-run reductions in violent crime offset by increases in property-crime arrests and problem behavior (Kling et al., 2005). Linking MTO participants to tax records, Chetty et al. (2016) show that children who moved at younger ages experienced higher adult earnings and college attendance, as well as lower rates of single parenthood, while effects were weaker or negative for those who moved during adolescence. This age gradient is a key piece of evidence in favor of childhood exposure effects.

Related quasi-experimental evidence from Chicago public housing demolitions points

in the same direction as MTO: Jacob (2004) finds little effect on short-run student achievement, whereas Chyn (2018) shows that children displaced to less disadvantaged neighborhoods experienced better long-run outcomes. Bergman et al. (2024) show experimentally that housing search and lease-up constraints, not just preferences, are major barriers to accessing better neighborhoods. In Seattle–King County, customized high-intensity housing services increased leasing in high-opportunity tracts from about 15 percent to over 50 percent, largely through search assistance rather than information or short-term financial incentives alone.

To obtain quasi-experimental evidence on the causal effects of neighborhoods for a large sample of children, Chetty and Hendren (2018a, 2018b) develop a mover-based design in which identification comes from comparing siblings who move at the same time but at different ages to new locations, and who therefore experience different levels of exposure to neighborhoods of different quality. Their evidence suggests that neighborhoods matter for children's long-run outcomes, and that these effects decline linearly with age at move, so that children who move at younger ages experience stronger effects than older children.

Outside the United States, the literature has relied primarily on descriptive mobility mapping and mover-based designs. Alesina et al. (2021) document large regional disparities in educational mobility across Africa and, using age-at-move variation, find sizeable regional exposure effects. In Brazil, Britto et al. (2024) show that intergenerational mobility is very low and estimate that place effects explain a substantial share of regional mobility gaps. In Australia, Deutscher (2020) use age-at-move variation to estimate causal exposure effects similar to those found in the U.S. on a range of adult outcomes, with larger effects for teenagers. Meanwhile, Laliberté (2021) find important long-run effects of both schools and neighborhoods in Montreal. Evidence for the Netherlands is more mixed: Beekers (2024) find that much of the observed regional heterogeneity reflects sorting once selective migration is carefully addressed.

Denmark in particular has been studied to examine the relative importance of families versus the neighborhoods they choose (Cholli et al., 2024b; Eshaghnia, 2023; Heckman & Landersø, 2022). This work argues that area effects are weaker than the intergenerational correlation of earnings would suggest. Eshaghnia (2023) argues that the timing of family moves in Denmark is endogenous. This paper tests whether social mobility measures and other area characteristics predict child outcomes for a vulnerable population and using the dispersal policy to provide plausibly exogenous variation in area exposure.

Overall, the literature suggests that place can matter causally for children's long-run outcomes, but that identification is crucial because families sort into neighborhoods on dimensions that are difficult to observe. We contribute to this literature in two ways. First, we study place-based opportunity in Denmark using a mover-exposure design. Second, we examine place effects for refugees, a setting in which quasi-random assignment of

families provides a stronger basis for identifying causal area-exposure effects on children.

2.1.2 Evidence from Refugee Dispersal Programs

There is a broad literature on the economic and social integration of refugees. Most of this work focuses on adult refugees, with calls for more research on the outcomes of refugee children (Bahar et al., forthcoming). Within this literature, many studies exploit policy variation to identify causal effects of integration policies, including reforms to legal status and access to labor markets (Arendt et al., 2023; Couttenier et al., 2019; Marbach et al., 2018), language training (Foged et al., 2024b; Lochmann et al., 2019), active labor market programs (Loiacono & Silva-Vargas, 2024; Sarvimäki & Hämäläinen, 2016), and cash transfers (Dustmann et al., 2024a; LoPalo, 2019). These studies generally find that such policies tend to improve refugee integration and may be economically beneficial in a cost-benefit sense, even though some can create disincentives and reduce employment, as in the case of cash transfers.

A closely related branch of this literature studies how settlement conditions affect subsequent outcomes. The starting point is Edin et al. (2003) in Sweden, who use a refugee placement policy to examine the role of co-ethnic networks for adult labor-market integration. There are some concerns that refugee sorting and municipality preferences for different ethnicities lead to some endogeneity concerns particular to Sweden, although the policy did shape where refugees settled on average (Dahlberg et al., 2012; Nekby & Pettersson-Lidbom, 2017). More recent studies analyze dispersal policies in other national contexts, including Switzerland (Martén et al., 2019), Germany (Aksoy et al., 2023), Italy (Campo et al., 2025), and the United States (Beaman, 2012). Together, these papers show that where refugees are initially placed has lasting consequences for their integration trajectories.

Prior work has studied the quasi-random assignment of refugees across areas in Denmark in particular. The policy in place from 1986–1998 is described in Damm (2005), and Damm (2009) use it to study how co-ethnic networks shape adult outcomes. Hasager and Jørgensen (2024) exploit the same Danish dispersal system to show that refugees assigned to lower-income neighborhoods face a materially higher risk of lifestyle-related disease 8–15 years after arrival. A subsequent reform in 1999 introduced a new dispersal policy, and Azlor et al. (2020) found local employment conditions mattered for adult refugees' employment. These adult impacts are directly relevant for intergenerational mobility: parental health and labor-market prospects affect earnings capacity, parenting inputs, and family stability, providing channels through which neighborhood disadvantage can be transmitted to children even if the "direct" effect of neighborhood exposure on children were modest.

Fewer dispersal-based studies focus directly on refugee children. The closest to our

work are Damm and Dustmann (2014) and Dustmann et al. (2023), who use the Danish dispersal policy to study how exposure to neighborhood crime affects subsequent criminal behavior among refugee youth, with results consistent with neighborhood social interaction as a key channel. Our paper builds on this work by (1) focusing on economic opportunity and its impacts on child wellbeing, (2) considering a wider range of child outcomes, and (3) demonstrating that economic opportunity and inequality can matter as much or more for youth crime than the crime rate itself. Other recent studies on refugee children, such as Pesola and Sarvimäki (2024) and Dustmann et al. (2024b), examine related questions about long-run outcomes and intergenerational transmission but do not rely on dispersal patterns for identification.

2.2 Danish Dispersal Policy

Denmark was the first country to sign and ratify the 1951 United Nations Convention on the Status of Refugees, and, in 1956, the Danish Refugee Council (DRC) was created (Gammeltoft-Hansen & Madsen, 2021). The DRC's mandate was to support asylum seekers in their applications for refugee recognition and residence permits in Denmark. Following a marked increase in refugee inflows in the early 1980s, the Danish government introduced a dispersal policy in 1986 for applicants whose asylum claims had been approved (i.e., recognized refugees). Implementation of this policy was delegated to the DRC.

The dispersal policy, in place from 1986 to 1998, was implemented in two steps (Damm & Dustmann, 2014; Dustmann et al., 2019, 2023). Prior to 1986, refugees were concentrated mainly in Denmark's largest cities, and the aim of the new policy was to prevent further clustering in these cities (Hasager & Jørgensen, 2024). The central goal was to allocate newly admitted refugees across the country's 275 municipalities, nested within counties, in proportion to each locality's population. These municipalities are best compared to incorporated towns or cities, or to small counties, in the United States.

Upon arrival and application for asylum, refugees were initially placed in Red Cross reception centers while their cases were adjudicated. These facilities, both historically and today, are generally located in sparsely populated areas. Until 2013, residents of these centers were not permitted to work, implying that most asylum seekers likely had limited contact with the wider Danish population before receiving official refugee status. By the late 1990s, the average processing time for an asylum decision exceeded one year (Foged et al., 2024b).

Once asylum was granted, refugees were transferred within 10 days to temporary accommodation in one of Denmark's 15 counties. The relevant local DRC office then assigned them to a municipality within that county and assisted them in obtaining permanent housing. Throughout the policy period, most refugees entered permanent housing

within 18 months; only 0–4 percent did not do so within that timeframe (Damm & Dustmann, 2014). Because some refugees initially resided in temporary housing near the municipality where they were ultimately assigned (often within three months, and on average after 6–7 months), we define the municipality of assignment as the municipality in which the refugee lived in the year after receiving a residence permit (Damm, 2009).

The DRC made municipality placement decisions without meeting refugees face to face. After asylum approval, refugees completed a short questionnaire with basic information, including nationality and household size, which the DRC could use to inform assignments. Our study benefits from observing the variables that would have been available to the DRC, and conditional on those variables the dispersal of families across municipalities is plausibly exogenous. We also observe parental education of refugees, which would not have been known to the DRC at the time of allocation, providing another check on the effective random assignment of refugees across areas.

Although refugees were not legally required to remain in the assigned municipality, they faced incentives to do so during the first 18 months after arrival. In particular, the 18-month introduction program—including Danish language courses, cultural orientation, and job training—was offered only in the municipality of assignment, even though access to means-tested social benefits and the ability to work were not contingent on staying (Damm, 2005). Moreover, the council evaluated requests for reassignment only after the initial placement had been made. We consider the mobility of refugees in more detail when mechanisms are explored below.

Finally, public sentiment toward refugees in Denmark was particularly hostile during the period 1986-1998. A shift may instead have begun a few years later, in the early 2000s, when the Danish People's Party, a populist right-wing party, began supporting the governing centre-right coalition, which in 2002 implemented the "Start Aid" reform, lowering welfare benefits for newly admitted refugees by around 40% (Dustmann et al., 2024a, 2024b).

3 Data Description

The analysis relies on Danish administrative records covering the entire population from 1986 to 2022. These high-quality data support linkages between parents and children and span a broad range of outcome domains. We obtain demographic characteristics and place of residence from the Population Register, labor-market income from the Income Register, educational attainment from the Education Register, criminal convictions from the Crime Registers, and information on foster care placements from the Foster Care Placement Register.

We also use registry data to identify refugees. From 1986–1992, because asylum status is not directly observable in the registers, we follow Damm and Dustmann (2014) and im-

pute refugee status. Specifically, we include children who arrived in Denmark within one year of their parents, whose parents immigrated from one of eight major refugee-sending countries (Lebanon, Iran, Iraq, Somalia, Sri Lanka, Vietnam, Afghanistan, or Ethiopia), and who were not married to someone from a non-refugee-sending country or to someone from a refugee-sending country who arrived more than one year earlier.[1] For 1993–1998, our sample includes children of all refugees granted asylum in the Residence Basis Register, excluding individuals from the former Yugoslavia because this group was initially granted provisional asylum and was subject to non-random dispersal under the Bosnian program that started in 1993 (Damm & Dustmann, 2014). Across all arrival cohorts, we restrict the sample to children who remained in Denmark for the first 15 years after arrival, using information from the Migration Register to focus on refugees who settled in Denmark. Below we show that inclusion in the analysis sample is not related to our main explanatory variables of interest, mitigating concerns over sample selection bias.

We measure child and parental baseline characteristics at the time of arrival in Denmark. Parental characteristics are measured for the first-arriving parent; if both parents arrived at the same time, we use the father's characteristics. Parental education is grouped into four categories: unknown, basic (high school or below), vocational, and academic (any education beyond high school that is not a vocational degree).[2] Municipality characteristics for each refugee child are measured at the time of assignment.

We measure opportunity by considering children's income rank as young adults relative to parental income rank, as described in more detail below. Income is measured as gross market income (earnings, self-employment income, and capital income). Employment at age 26 is defined as having positive, non-zero income, and our raw earnings outcome is measured as the average of non-missing incomes over ages 26–30, conditional on being able to observe the child as aged 30 in the data. In our context, missing earnings is rare because it does not imply zero earnings, which are recorded as zero in the data.[3] We winsorize income at the 99.5th and 0.5th percentiles.[4] Education, marriage, and crime outcomes for refugee children are measured by age 30. Crime outcomes are measured as criminal convictions and exclude traffic offenses. Foster care placements are measured before age 18 (Cavalca et al., 2023); teenage births are defined as becoming a mother at any point up to and including age 19 (Kearney & Levine, 2012).

In addition to measuring child and parental characteristics, we also measure characteristics of the municipalities to which refugees were assigned. We choose these municipal

[1]Refugees from these eight countries accounted for more than 86 percent of all permanent residence permits issued in Denmark to refugees between 1985 and 1997 (Damm & Dustmann, 2014).

[2]This grouping is identical to the one used by Foged et al. (2024a) to study refugees arriving in the same period as our sample.

[3]We recode negative incomes reported in any year to zero following Cholli et al. (2024a).

[4]Since the income distributions contain mass points at 0, representing shares larger than the 0.5th percentile, we assign all individuals with zero income in each year the midpoint between 0 and the lower cutoff for positive incomes.

characteristics to capture factors likely to affect refugees' integration more broadly, as well as the specific outcomes we study. For each arrival year, we measure a wide set of municipal characteristics: log population; the percent of residents who are non-Western immigrants; the percent of residents who are co-nationals (including immigrants and descendants); the share of adults aged 18–60 with a high school degree; the employment rate among adults aged 18–60; mean earnings among adults aged 18–60; the poverty rate, following the OECD (2024) definition and measured as the share of households with incomes below half the national median household income; the Gini index among adults aged 18–60; the crime rate, defined as the average number of convictions among residents aged 15–25; the share of 0–18-year-olds placed into foster care; and the share of births to teen mothers, defined as births to mothers aged 19 or younger.

Table 1 presents descriptive statistics for the refugee-child sample. The full sample comprises 12,425 children who were assigned to municipalities across Denmark under the dispersal policy during 1986–1998. The average age at arrival was 7.4 years for children and 36.8 years for parents. In 18.7 percent of cases, at least one parent held an academic degree (bachelor's or higher) before arriving in Denmark, and 90.7 percent of children had married parents upon arrival. The average family had 0.46 young children aged 0–2 at arrival and 2.98 children aged 3–17. Overall, refugee children in our sample appear to come from families with relatively low levels of education and potentially more conservative family norms, as reflected in the high marriage rates and relatively large family sizes. On average, 69.1 percent of refugee children were employed at age 26, and they earned $19,660 per year in the labor market at ages 26–30.[5] This implies that the children reached an average income rank of 38.8 within the national distribution of their birth cohort, while their parents reached a mean rank of 13.5 among parents of children in the same birth cohorts. The average refugee child in the sample thus climbed substantially higher in the income-rank distribution relative to their parents. Table A1 in Appendix A shows the top ten countries of origin, along with a residual "Other" category, for the refugee children in the sample. More than 70 percent of the children came from the top four countries: Lebanon, Iraq, Iran, and Somalia.

4 Empirical Strategy

In this section we describe how we construct our opportunity measures for local residents, how we validate them using mover designs, and how we then relate these measures to outcomes for refugee children and their parents.

[5]Child and parental incomes are deflated to 2015 Danish kroner using the Danish Consumer Price Index published by Statistics Denmark and converted to 2015 U.S. dollars using a purchasing power parity exchange rate of $100 to 776 DKK (Cholli et al., 2024a).

4.1 Measuring Realized Opportunity

To define our primary measure of intergenerational mobility in municipalities, Realized Opportunity, we follow the methodology in Chetty and Hendren (2018a). Using Danish administrative data, we take the universe of individuals who are age 30 in each year and restrict attention to children whose parents were permanent residents (i.e., families that remain in the same municipality throughout the period in which parental income is measured). For each child i, we compute (i) the child's percentile rank within their year-of-birth cohort's national labor-income distribution, averaged over ages 26–30; and (ii) the primary earner's (typically the father's) percentile rank within the national labor-income distribution, averaged over the years when the child was ages 24–28.[6] Each child's municipality is assigned based on the mother's municipality; if maternal information is missing, we use the father's. The municipality is assigned to each child based on the years in which parental income is measured. We then estimate the simple linear model for local child i living in municipality $m(i)$ born in year-of-birth cohort $s(i)$ via OLS (suppressing the i subscripts on m and s for clarity):

$$y_i \;=\; \alpha_{ms} \;+\; \psi_{ms}\, p_i \;+\; \varepsilon_i, \tag{1}$$

where y_i is the child rank and p_i the parental rank. The Realized Opportunity index is allowed to vary at the birth-cohort-by-municipality level. Specifically, for each cell (m, s) we recover the fitted intercept $\hat{\alpha}_{ms}$ and slope $\hat{\psi}_{ms}$ from the cohort-specific regression above and compute the predicted adult rank for a child whose parents were at the 25th percentile:

$$\hat{y}_{25,ms} \;=\; \hat{\alpha}_{ms} \;+\; 25\,\hat{\psi}_{ms}. \tag{2}$$

Because the index is evaluated at a common point in the parental income distribution, it isolates variation in upward mobility rather than differences in parental resources. The measure captures how well a municipality translates low-income origins into higher adult outcomes. We estimate it using incumbent cohorts observed before the arrival of the refugee sample analyzed later; the index is therefore predetermined with respect to refugee placement. For the refugee sample, the measure varies by year of arrival. We restrict attention to municipality-years for which it is estimated based on at least 10 observations.

We apply empirical Bayes shrinkage to adjust for statistical noise arising from estimation uncertainty, which would otherwise be more likely to affect opportunity estimates

[6]The age range for parental income was chosen because the Income Register begins in 1980, which implies that age 24 is the earliest age at which we can measure parental income for children observed at age 30 in 1986. This constraint, combined with the desire to maintain consistency across years, motivated the chosen age range for parental income.

for smaller municipalities (Chetty et al., 2026b). When estimating causal effects, the opportunity measures are always standardized to have mean zero and standard deviation one.

4.2 Measuring Ongoing Opportunity

Our second measure of intergenerational mobility in municipalities is Ongoing Opportunity, which more closely follows the methodology of Chetty and Hendren (2018a, 2018b) and Chetty et al. (2026b) because it contemporaneously measures how a birth cohort from a given municipality will fare at ages 26–30 in the future. This has the advantage of capturing economic conditions as the refugee children age, but the disadvantage that it is unknown at the time of dispersal and could reflect spillover impacts of refugees on the performance of native-born peers (Manski, 1993). As with Realized Opportunity, this measure is the predicted adult income rank for a child whose parents are at the 25th percentile. For Ongoing Opportunity, parental income is measured when the child is aged 15–19, and in the estimation samples it varies at the cohort-by-municipality level rather than the year-of-arrival-by-municipality level; otherwise, the methodology is analogous.[7]

4.3 Mover Exposure Design

To add to the literature on opportunity among locals and validate these measures, we estimate area effects for non-refugee (local) movers in Denmark, employing the mover-exposure design from (Chetty & Hendren, 2018a, 2018b). Specifically, we study a sample of local movers who were aged 0–22 and whose parents moved once from one municipality to another before the child turned 23 during 1986–2014. As for the refugees in our main analysis, we define municipalities using pre-2007 municipal-reform boundaries.[8] Table 3 reports descriptive statistics for our sample of movers. On average, movers reach an income rank of 52.26 at ages 26–30, and their parents' average income rank is 51.21. These values suggest that movers are broadly nationally representative, but they rank notably higher than refugees, whose children and parents rank considerably lower, indicating that the groups differ.

To estimate area effects, we relate child income rank at ages 26–30, y_i, to the change in Realized Opportunity, Δ_{odt}, between the origin municipality o and the destination municipality d for a child moving in year t:

[7]Since we measure parental income at ages 15–19 for Ongoing Opportunity, rather than at ages 24–28 as we do for Realized Opportunity, the Ongoing Opportunity results can be viewed in part as a robustness check on the age at which parental income is measured.

[8]The Danish 2007 municipal reform ("Strukturreformen") merged the 271 municipalities that existed at the time into 98 larger entities.

$$y_i = \omega_{ot} + \gamma \Delta_{odt} + \sum_{a=0,\, a \neq 17}^{22} \upsilon_a \mathbf{1}\{a_i = a\} + \sum_{a=0,\, a \neq 17}^{22} \eta_a \, \mathbf{1}\{a_i = a\} \, \Delta_{odt} + \psi X_i + \varepsilon_i, \quad (3)$$

where ω_{ot} are origin-by-year-of-move fixed effects, and X_i is a set of child and parental characteristics. The coefficients of interest, η_a, capture how the effect varies with the length of exposure to the destination municipality during childhood. We estimate versions of (3) both without and with family fixed effects. With family fixed effects, identification of η_a comes from comparing siblings whose parents move, where differences in siblings' ages at the time of the move generate differences in their exposure to the destination municipality. The identifying assumption is that this within-family variation in exposure time is not endogenously related to the move.

We report estimates using both Realized and Ongoing Opportunity to follow the methodology in Chetty and Hendren (2018a) as closely as possible. When estimating effects using Ongoing Opportunity, the variables are indexed by birth cohort, c, rather than by the year of the move, but otherwise the methodology is identical.[9]

4.4 Measuring Impacts of Area Opportunity on Child Outcomes

Having estimated opportunity measures, we next exploit the quasi-random dispersal of refugees across municipalities to test whether assignment to higher-opportunity areas causally improves children's economic trajectories. Our empirical specification for the main results relates refugee outcomes to the Realized Opportunity in their municipality of assignment, controlling for observable characteristics. For each outcome, we estimate for refugee child i assigned to municipality $m(i)$ arriving in year $T(i)$ from country of origin $o(i)$:

$$y_{imoT} = \beta_0 + \beta_1 \hat{y}_{25,ms(T)} + \theta X_{iT} + \kappa_T + \mu_o + u_{imoT}, \quad (4)$$

where y_{imoT} denotes an outcome for refugee child i (e.g., income rank at ages 26–30, years of schooling, or the number of criminal convictions up to age 30); $\hat{y}_{25,ms(T)}$ is the Realized Opportunity in the municipality of assignment measured for the birth cohort of locals s who were age 30 at the child's time of arrival, T. X_{iT} is a set of child and parental characteristics measured at arrival; κ_T are year-of-arrival fixed effects; and μ_o are country-of-origin fixed effects. Standard errors are clustered at the municipality level. In robustness checks we show that the results are similar when using a clustered bootstrap

[9] The results with Ongoing Opportunity are those for which the methodology most closely aligns with the estimates in Chetty and Hendren (2018a).

that accounts for sampling variation due to the opportunity measures being generated regressors.

5 Measuring Economic Opportunity in Denmark

We begin our empirical analysis by characterizing how economic opportunity varies across municipalities in Denmark among incumbent residents. This step serves two purposes: it shows that Denmark exhibits meaningful spatial variation in mobility despite high average mobility, and it anchors our Realized and Ongoing Opportunity measures in familiar rank–rank patterns before turning to refugees.

To gauge how economic opportunity varies, we first estimate the rank–rank relationship linking parents' and children's incomes among permanent residents. This approach allows us to distinguish areas that merely have a high baseline level of economic resources from those that may actively foster upward mobility despite a lower baseline. We then use this rank–rank relationship to construct the measures of Realized and Ongoing Opportunity specific to the municipalities where refugees were quasi-randomly assigned.

Figure 1 presents a binned scatterplot of this relationship, aggregated across Denmark for the cohort that was age 30 in 1992. The figure plots mean child rank within bins of the parental distribution, together with a 95 percent confidence band (shaded area) and the best-fitting linear trend (green line). The intercept of around 46 implies that children born at the bottom of the distribution can expect to rise to near the median. By comparison, the intercept in the United States is closer to 34 (Chetty et al., 2014), 34 in the Netherlands (Beekers, 2024), and 23 in Brazil (Britto et al., 2024). The estimated national slope is 0.134, implying that a one-percentile increase in parental rank translates into a 0.134-percentile increase in child rank. The tight confidence intervals and near-linearity of the fit suggest that the single-parameter summary, $\hat{y}_{25,ms}$, captures the intergenerational association well across the bulk of the distribution.[10] Figure A2 shows an analogous binned scatterplot in which parental income is measured at ages 15–19, consistent with the methodology used to estimate Ongoing Opportunity. The figure is shown for the 1991 birth cohort when the timeframe of the data allows such an estimation; the estimates are similar, with an intercept of 45 and an estimated national slope of 0.164.

Table 2 contrasts our Danish rank-rank estimates of 0.13–0.16 with estimates from other countries in the intergenerational mobility literature. Chetty and Hendren (2018a) and Chetty et al. (2014) establish the U.S. benchmark using federal tax records, with a rank-rank slope of 0.32-0.35, while Bratberg et al. (2017), Deutscher and Mazumder (2023), Corak (2020), and Acciari et al. (2022) report comparable estimates for Germany

[10]The bottom vigintile is below the line of best fit, and when we restrict the analysis to parents at or below the 40th percentile, the estimated slope increases to 0.256 (Figure A1).

(0.245), Norway (0.223), Sweden (0.215), Australia (0.215), Canada (0.242), and Italy (0.220). Other work extends this approach to the Netherlands, with estimates of 0.20-0.25 (Beekers, 2024), and to Brazil, where Britto et al. (2024) report a markedly higher estimate of 0.539 after accounting for informal income.

We next turn from national averages to spatial variation. Figure 2 displays two maps of Denmark illustrating this variation in the Realized Opportunity measure among permanent residents, averaged over 1986–1998 across Danish municipalities. Panel (a) shows that Realized Opportunity ranges from 44.8 to 57.4 across municipalities, which is similar to the range in the Netherlands and smaller than in the United States (Beekers, 2024; Chetty & Hendren, 2018a). Panel (b) reports the percentage of refugee children dispersed to each municipality between 1986 and 1998. Larger shares were placed in Denmark's five largest cities (Copenhagen, Aarhus, Odense, Aalborg, and Esbjerg), which is unsurprising given that the dispersal policy allocated refugees roughly in proportion to municipal population. Nevertheless, refugee children were widely dispersed across most municipalities, and the correlation between dispersal share and Realized Opportunity is –0.24. To illustrate the role of shrinkage, Figure A3 shows two maps of Realized Opportunity, without and with empirical Bayes shrinkage. The maps indicate that the spatial patterns are nearly identical, but that the range narrows to 46.0–53.7 after applying shrinkage.

The two measures of opportunity are highly correlated. Figure A4 shows a binned scatterplot of Ongoing Opportunity vs. Realized Opportunity, with both measures standardized to have mean zero and standard deviation one. The estimated slope is 0.626 with a standard error of 0.05, indicating that while the measures are tightly linked, they are not mechanically identical. Figure 3 then shows the evolution of Realized and Ongoing Opportunity across year-of-arrival cohorts from 1986 to 1998 in our sample of refugee children. Both measures declined over this period, with larger decreases from 1986 through the early 1990s and a slight increase thereafter. The figure indicates that absolute mobility for children growing up in Denmark declined over the period we study, similar to developments documented in the United States (Chetty et al., 2017).

Because the measure of Realized Opportunity is computed from equation (1) and consists of an intercept term ($\hat{\alpha}_{ms}$) and a slope term ($25\,\hat{\psi}_{ms}$), we can decompose the measure into these two components (Chetty et al., 2014). The intercept term captures absolute mobility and indicates where children from the bottom of the parental income distribution can expect to end up in the income distribution. The slope term captures relative mobility and indicates how much higher children can expect to rank when their parents rank higher in the income distribution. Realized Opportunity is defined as the sum of these two components evaluated at a parental income rank of 25. Figure A5 shows that each component varies across municipality-years. Figure A6 shows three maps of Danish municipalities: Panel (a) displays our Realized Opportunity measure, Panel (b) displays the intercept, and Panel (c) displays the slope multiplied by 25. Consistent with

the histograms in Figure A5, the spatial distributions of the intercept and slope do not fully overlap. The unweighted correlation between the slope and intercept is –0.69, while the population-weighted correlation is –0.71.

5.1 Mover-Exposure Results

Having established that Denmark exhibits substantial spatial variation in opportunity among permanent residents, we next use the mover-exposure design to validate that these differences have causal content for locals.

Figure A7 shows histograms of the changes in Realized and Ongoing Opportunity between origin and destination municipalities within children's cohorts at the time of the move. The figure displays the distributions without and with shrinkage and shows that changes in Ongoing Opportunity are more dispersed than changes in Realized Opportunity and that applying empirical Bayes shrinkage compresses both distributions. As in the refugee analysis, we report results from estimating equation (3) using the shrinkage-adjusted measures and standardized changes in Realized and Ongoing Opportunity.

Figure 4 presents results from estimating (3), plotting the η_a coefficients on the y-axis against age at move on the x-axis. Panel (a) shows estimates using Realized Opportunity, while panel (b) shows estimates using Ongoing Opportunity. Both panels include family fixed effects, and age 17 is the reference category.[11] The estimates in panel (a), using Realized Opportunity, are noisier than those in panel (b), using Ongoing Opportunity, but both panels suggest positive effects of area opportunity for younger children: most of the estimates are positive up to age 12. The estimates in panel (a) imply that moving a child to a municipality with one-standard-deviation higher Realized Opportunity at age 0 (relative to moving at age 17) increases income rank at ages 26–30 by 2.0 points. The fitted linear trend has a slope of –0.06 with a standard error of 0.02, and the linear fit provides a reasonable, though imperfect, approximation to the relationship between area effects and age at move. The results in panel (b) using Ongoing Opportunity display a very similar pattern but with larger magnitudes and higher statistical significance: moving a child to a municipality with one-standard-deviation higher Ongoing Opportunity at age 0 (relative to moving at age 17) increases income rank at ages 26–30 by 3.0 points.

[11] Figure A8 in Appendix A shows results without family fixed effects.

6 Measuring Impacts of Economic Opportunity for Refugee Children

6.1 Balance

Before interpreting the dispersal of refugee families as a plausibly exogenous shock to area exposure, we present a set of balance tests comparing refugee family characteristics predetermined at the time of assignment across municipalities. These tests parallel those used in prior work on the Danish dispersal policy and provide a bridge between our opportunity measures and the causal interpretation of the refugee results.

Table 4 shows the correlations between our main treatment variable, Realized Opportunity, and individual characteristics of the refugee children in our sample. Specifically, Realized Opportunity is regressed on child and family characteristics in a multivariate regression that includes year-of-arrival and country-of-origin fixed effects; standard errors are clustered at the household level. The two joint F-tests at the bottom of the table assess whether (i) parent and child characteristics observed by the DRC at allocation, or (ii) parental education (unobserved by the DRC at the time of allocation), collectively predict placement.

The table indicates that, controlling for year and country of origin, demographic factors observable to the DRC are only marginally significantly related to Realized Opportunity, with a p-value for the joint F-test of 0.07. The relationships are not large in magnitude, however. For example, the indicator for parents being married is associated with a 0.35-percentage-point reduction in Realized Opportunity, or 0.7 percent of the mean. This suggests that the DRC did not systematically use these demographic characteristics when choosing the destination. In addition, parental education—which was unobserved by the DRC—is not correlated with Realized Opportunity, and the p-value for the joint F-test of the education indicators is 0.56, providing further confirmation that the placement of refugees is effectively random.

Table A2 reports coefficients from eleven additional regressions of municipal characteristics measured in the year of arrival. These characteristics range from population measures (log population, percent non-Western immigrants, and percent co-nationals) and educational attainment (percent of adults with a high school degree) to labor market and income measures (employment rate, mean earnings), inequality (poverty rate, Gini index), and measures of risky behavior (the crime rate, the foster care rate, and the share of births to teen mothers). The balance tests again show that observed demographic characteristics are not meaningfully related to municipality characteristics, and that refugee parents' educational attainment acquired prior to immigration, which was unknown to placement officials, does not predict these municipal characteristics. This interpretation is consistent with similar tests in other studies of the same dispersal policy (Damm &

Dustmann, 2014; Foged et al., 2024a).

As an additional balance check, we also test whether Realized Opportunity affects the probability of being included in our analysis sample. One restriction is that refugees need to settle in Denmark by remaining for at least 15 years, and we need to observe the child's later-life outcomes. Initial area assignment and the opportunity there could affect outmigration, leading to sample selection bias. Table A3 reports regression estimates where sample inclusion is regressed on Realized Opportunity, controlling for child and parental characteristics as well as country of origin and year of arrival. The coefficient on Realized Opportunity is statistically insignificant in all three regressions.

Taken together, these balance tests support the interpretation that the Danish dispersal policy during 1986–1998 provides plausibly quasi-random variation in municipality assignment, conditional on baseline characteristics observed by the DRC, and that endogenous self-selection into municipalities does not appear to drive our main results.

6.2 Place Effects for Refugee Children

With the opportunity measures and balance tests in place, we now estimate how the areas to which refugee children were assigned shape their long-run outcomes.

There is substantial heterogeneity in the opportunity measures across the municipalities where refugees were dispersed. Figure A9 shows the distributions of Realized Opportunity (Panel (a)) and Ongoing Opportunity (Panel (b)) experienced by child refugees, in both cases with and without shrinkage. With shrinkage, the mean (standard deviation) of Realized Opportunity is 49.12 (2.55); for Ongoing Opportunity the mean (standard deviation) is 48.81 (3.13). The figure shows that empirical Bayes shrinkage slightly compresses the distributions and that the distribution of Ongoing Opportunity is wider than that of Realized Opportunity. In all regressions, we report estimates using opportunity measures after shrinkage.[12]

Because social-mobility indices are built on the earnings experiences of children and their parents, a natural starting point is to examine refugee children's earnings as adults. Table 5 shows that refugee children whose families were quasi-randomly placed in municipalities with higher Realized Opportunity climb higher in the income distribution in adulthood. In the baseline specification, which includes only year-of-arrival fixed effects, a one-standard-deviation increase in the Realized Opportunity index raises a child's income rank at ages 26–30 by 1.78 points. Adding characteristics observed by the DRC lowers the coefficient to 1.45. Parental education, which was unobserved by the DRC at the time of assignment, is related to child income: those whose parents had an academic degree are 3.4 percentiles higher in the income ranks. Nevertheless, adding this variable yields a similar estimated effect of Realized Opportunity, with a coefficient of 1.46. In

[12]In Section 6.5 we show that our main estimates are largely unaffected by the shrinkage procedure.

terms of the other covariates, family size is associated with lower earnings, and male refugees are 7 percentiles higher in the income distribution compared to female refugees. Age at arrival is also strongly associated with income, with an additional year of age at arrival corresponding to 1.14 percentile points lower in the income distribution; in other words, an infant arrival would be approximately 19 points higher in the income distribution compared to a 17-year-old arrival. We return to this age gradient below.

Table 6 considers a broader set of outcomes and estimates effects of Realized Opportunity on education, employment, income, and marriage.[13] Across all specifications, we include the full set of controls used in Table 5: parental demographics, child demographics, parental education, arrival-year fixed effects, and country-of-origin fixed effects. The table shows that assignment to higher-opportunity areas leads to gains in early-career labor-market success. The area where children grow up has modest effects on educational attainment: a one-standard-deviation increase in Realized Opportunity results in a 1.1-percentage-point higher likelihood of obtaining a vocational degree (3.1 percent of the sample mean), significant at the 10 percent level. Impacts on labor-market outcomes are clearer: a one-standard-deviation increase in Realized Opportunity is associated with a 2.0-percentage-point higher likelihood of employment at age 26 (4.4 percent higher than the mean) and an $863 increase in annual earnings over ages 26–30 (2.9 percent of the sample mean). Higher-opportunity areas do not appear to increase the likelihood of being married at age 30.

Table 7 reports the effects of assignment to higher-opportunity areas on criminal convictions, the likelihood of being placed in foster care by age 18, and the likelihood of teenage motherhood for girls. The likelihood of any criminal conviction is strikingly high in this population at 37 percent,[14] but Realized Opportunity primarily affects the intensive margin. A one-standard-deviation increase in Realized Opportunity decreases the number of criminal convictions by age 30 by 0.11, driven primarily by a 0.07 decline in property-crime convictions. These effects correspond to 6.7 percent and 10.3 percent of the sample means, respectively.

The table also suggests that higher Realized Opportunity reduces the likelihood of foster care and teenage motherhood: a one-standard-deviation increase is associated with a 0.7-percentage-point decrease in the probability of foster care and a 0.5-percentage-point decrease in teenage motherhood. These effects correspond to 10.0 percent and 8.2 percent of the sample means, respectively, although they are less precisely estimated and statistically significant at the 10 percent level.

Overall, our findings show that Realized Opportunity improves refugee children's

[13] In Table 6 and all remaining regression tables in the main text, we omit coefficients on variables that are not of direct interest. Results from the same regressions, reporting all coefficients except fixed effects, are provided in Appendix B.

[14] The prevalence of criminal conviction, which excludes traffic violations, is consistent with prior research in this population (Damm & Dustmann, 2014).

labor-market outcomes in adulthood and reduces the number of criminal convictions by age 30, driven in large part by reductions in property-crime convictions. In addition, we find suggestive positive effects on the likelihood of obtaining a vocational degree and reductions in the probability of entering the foster care system and in the incidence of teenage motherhood.

6.3 Exploration of Mechanisms

In this section, we explore mechanisms that may underlie the main reduced-form effects and estimate heterogeneous impacts across subgroups of refugee children and parents.

6.3.1 Assignment and Exposure to Opportunity

Our interpretation of the main results is that the municipality of assignment matters because it shapes the environment in which children grow up. This interpretation requires that assignment is strongly related to actual exposure. Since families can move after assignment, the estimates in Section 6.2 should be viewed as intent-to-treat (ITT) effects that relate the municipality of assignment to child outcomes.

Figure A10 illustrates the persistence in location by showing the fraction of refugee children who remain in the municipality of assignment up to 15 years after arrival. For most of the 15 years following arrival, the majority of refugee children lived in the municipality of assignment, and after 15 years roughly half were still living there. In our sample, the average time spent living in the municipality of assignment was 10.23 years.

Figure 5 assesses this link by plotting a binned scatterplot of exposure to Realized Opportunity in the municipality of residence up to age 25 against Realized Opportunity in the municipality of assignment for refugee children. The figure includes a fitted line from a regression that controls for year of arrival, country of origin, and child and parental characteristics. The estimated slope is 0.73 (standard error 0.028), indicating that assigned and realized exposure to Realized Opportunity are highly correlated.

This "first stage" implies that an IV estimate of the relationship between child outcomes and the opportunity in the area where children actually grow up would divide the ITT estimates by 0.73, yielding local average treatment effects that are about 37% larger than the ITT effects of assignment.

6.3.2 Place Effects on Refugee Parents

One mechanism through which higher-opportunity areas could benefit children is by improving their parents' outcomes. To examine this channel, Figure 6 plots average parental income rank (vertical axis) against our Realized Opportunity index for the municipality to which each refugee family was assigned (horizontal axis). Parental income is measured when the children are ages 24–28. Each point represents the mean within a one-percentile

bin, and the solid line shows a linear fit estimated with controls for year of arrival, country of origin, child gender and age, and parental age, gender, and education at arrival.

The positive slope indicates that parents assigned to municipalities with higher Realized Opportunity themselves climb higher on the income ladder. A one-standard-deviation increase in Realized Opportunity leads to an eventual increase of about 0.989 percentile points in parental income rank. Thus, the same area characteristics that foster upward mobility among refugee children also generate meaningful earnings gains for their parents.

We also ask how strongly parental income ranks for refugee parents predict their children's income ranks—an opportunity measure defined within the refugee population. Figure A11 displays a binned scatterplot with 100 bins of national rank–rank estimates for the refugee children in our sample, where income rank is measured within the national income distribution of the child's birth cohort. Each dot represents the mean adult income rank for refugee children, averaged over ages 26–30, plotted against a bin of parental income rank. As expected given relatively low labor-force attachment among recently arrived refugees, the distribution of parental ranks is heavily concentrated at the bottom. The estimated slope is 0.299 (standard error 0.02), with an intercept slightly above 35. Parental resources therefore appear to be more important for the adult outcomes of refugee children than in the national relationship, but the slope remains smaller than estimates from the United States, while the intercept is higher (Chetty & Hendren, 2018a).

Putting these results together, parental income rank is correlated with child income rank among both local Danes and refugees. Among local Danes, the national slope was 0.13; among lower-income Danes, it was 0.26; and among refugees and their children, it is about 0.30. Given that a one-standard-deviation increase in Realized Opportunity raises refugee parents' income rank by about one percentile point, the simple correlation suggests that child income rank would increase by less than 0.3 percentile points via this parental channel—roughly 20% of the estimated area effects in Table 5. This calculation suggests that improvements in parents' earnings explain only part of the overall place effects for refugee children.

6.3.3 Social Integration

A complementary mechanism is social integration. Areas with higher social mobility may be places where it is easier to build beneficial social networks or access higher-quality schools and services. To the extent that such integration is easier for younger children, we can learn about this channel by comparing results for children who arrive in Denmark at different ages.

Figure 7 summarizes the relationship between age at arrival and adult income ranks. The figure shows two sets of coefficients from regressions of income rank at ages 26–30

on age-at-arrival indicators, one without and one with family fixed effects.[15] In both cases, refugee children who arrive at younger ages tend to have substantially better outcomes in adulthood. Arriving at age 0 rather than age 17 is associated with an increase in early-adulthood income rank of 22.70 percentile points without family fixed effects and 18.66 percentile points with family fixed effects. The slopes of fitted linear trends through the age-at-arrival coefficients are -1.47 and -1.34, respectively, without and with family fixed effects; both are highly significant, and the linear fit captures the declining pattern reasonably well.[16] This pattern, whereby younger refugee children experience improved integration relative to older children, is consistent with existing evidence on the integration outcomes of immigrant children (Bleakley & Chin, 2004, 2010).

Table 8 further explores heterogeneity in the effects of Realized Opportunity by age at arrival. We split the sample into four groups based on age at arrival (0–5, 6–11, 12–17, and 18–22) and estimate the effects of Realized Opportunity separately for each group on both child income rank at ages 26–30 and the number of criminal convictions by age 30. The point estimates suggest that the effects of Realized Opportunity on income rank may be larger for children who arrive at older ages, but we cannot reject equality across groups at conventional significance levels (the p-value for a joint test of equality is 0.163). For criminal convictions, the pattern is less systematic, with most of the effects concentrated among those arriving at ages 6–11 and 18–22.

6.3.4 Alternative Opportunity Measures

We also examine how our main results change when we construct Realized Opportunity in different ways, both to better understand what the index is capturing and to assess whether "the relevant opportunity" for refugees is the same as for natives.

A first question is whether the opportunity measure that matters for refugees is based on the mobility of natives, of immigrants and descendants, or both. To explore this, we restrict attention to municipalities for which we can construct Realized Opportunity using only immigrants and descendants, imposing a minimum of 10 observations per municipality-year cell when constructing any Realized Opportunity measure.[17]

Columns (1)–(3) of Table 9 report results from regressions with child income rank

[15] In the specification with family fixed effects, all terms that are constant within the family drop out, including Realized Opportunity, but this does not affect the interpretation of the coefficients plotted in Figure 7. Standard errors are clustered at the municipality level in specifications without family fixed effects and at the family level in specifications with family fixed effects.

[16] Figure A12 shows age-exposure estimates for the refugee children in our sample, following the mover-design methodology in Chetty and Hendren (2018a, 2018b), which allows area effects to vary with age at arrival. These results do not yield strong additional insights: the estimated age-exposure profile is relatively flat, likely due to the comparatively small sample of refugee children relative to other studies.

[17] Given these constraints, we include both immigrants and descendants in the measure to ensure that we can construct this alternative Realized Opportunity index for enough municipalities and that it varies across a sufficient number of municipality-years to yield reliable inference.

at ages 26–30 as the outcome, where Realized Opportunity is estimated separately for two groups of permanent residents: (i) immigrants and descendants and (ii) natives. Column (1) regresses child income rank on the measure constructed for immigrants and descendants, while column (2) uses the measure constructed for natives. Column (3) includes both measures simultaneously. Both measures significantly predict refugee children's adult outcomes when entered separately, and both remain significant when included jointly. If anything, the estimates in column (3) suggest that the mobility rate for natives may be slightly more important: its coefficient is larger and more precisely estimated, likely reflecting less measurement error. Panel (a) in Figure A13 complements these regressions by showing a binned scatterplot of natives' Realized Opportunity against the corresponding measure for immigrants and descendants, with both measures standardized.[18] The estimated slope is 0.49 (standard error 0.11), indicating that the two measures are highly, but not perfectly, correlated.

We next consider gender-specific Realized Opportunity measures. Columns (4) and (5) of Table 9 report results from regressions that use separate measures for boys and girls. Column (4) regresses boys' income rank at ages 26–30 on both the boys' and girls' Realized Opportunity measures; column (5) does the analogous regression for girls. For boys, only the boys' Realized Opportunity measure is statistically significant; for girls, only the girls' measure is significant. This pattern adds credibility to the idea that there is something about the area that helps children succeed, and that this "something" interacts with gender. The estimates also suggest that effects may be larger for girls: the coefficient on girls' Realized Opportunity is 1.57, compared with 1.00 for boys. Panel (b) in Figure A13 shows a binned scatterplot of Realized Opportunity for the child's opposite gender against Realized Opportunity for the child's own gender. The estimated slope is 0.35 (standard error 0.09), indicating a strong positive correlation but also substantial independent variation.

Finally, column (6) of Table 9 uses the decomposition of Realized Opportunity from equation (2) and regresses child income rank at ages 26–30 on the intercept term ($\hat{\alpha}_{ms}$) and the slope term ($25\,\hat{\psi}_{ms}$). Recall that the intercept captures absolute mobility—where children whose parents are at the bottom of the income distribution can be expected to end up—while the slope captures relative mobility, measuring how strongly parental ranks are transmitted to children. Both terms are highly significant and positively associated with child income rank in adulthood, with a slightly larger coefficient on the slope term (2.74 versus 2.00). Panel (c) in Figure A13 shows a binned scatterplot of the intercept against the slope term (multiplied by 25). As expected, the two components are strongly negatively correlated: the estimated slope is -0.77 (standard error 0.05).

Overall, the results in Table 9 show that mobility rates for both immigrants and

[18] All Realized Opportunity measures in Table 9 and Figure A13 are standardized, so the coefficients are comparable.

descendants and for natives have positive effects on refugee children's income rank at ages 26–30, that the mobility rate for the child's own gender is the most predictive, and that both absolute and relative mobility components of Realized Opportunity matter for children's adult income.

6.3.5 Realized Opportunity and Other Municipal Characteristics

Realized Opportunity is a broad, outcome-based measure of intergenerational mobility at the municipal level. It is of interest in its own right and can also provide insights into place-based policies and efforts to "move to opportunity." Places with higher social mobility may differ along many dimensions, and characterizing these differences helps illuminate the kinds of communities that encourage mobility.

Table 10 examines how Realized Opportunity relates to other municipal characteristics in the sample of refugee children. We consider the same set of municipal characteristics as in earlier sections, capturing demographic composition, educational attainment, labor-market conditions and earnings, inequality, and measures of risky behavior. All variables are measured at the time of arrival so they could, in principle, be used in refugee dispersal policy. Column (1) reports coefficients from bivariate regressions of Realized Opportunity on each municipal characteristic. Realized Opportunity is higher in smaller municipalities and in areas with fewer immigrants and co-nationals. High-mobility municipalities are also areas with stronger labor-market conditions—higher employment rates, higher mean earnings, and lower poverty rates—and they display less inequality as measured by the Gini coefficient. In contrast, they do not differ markedly in terms of crime rates, foster-care prevalence, or teen birth rates.

Column (2) includes all municipal characteristics simultaneously to assess which continue to predict Realized Opportunity conditional on the others. In this multivariate setting, measures of earnings potential and inequality remain statistically significant predictors of Realized Opportunity. Individual coefficients are more difficult to interpret because of collinearity among related characteristics, and the poverty rate even flips sign when controlling for the other variables.

To complement this approach, column (3) uses LASSO to select the subset of municipal variables that best predict Realized Opportunity and then re-estimates a standard regression on the selected variables.[19] The post-LASSO results suggest that the employment rate and the Gini index are the strongest predictors of Realized Opportunity, consistent with the negative relationship between social mobility and inequality known as the Great Gatsby curve (Britto et al., 2024; Corak, 2013).

[19] All variables were standardized prior to the LASSO step, even though the variables reported in the table are not standardized.

6.3.6 Horse Race Regressions

We next compare the predictive power of Realized Opportunity to other municipal characteristics that could be used to target place-based policies or dispersal programs. Table 11 regresses child income rank at ages 26–30 on Realized Opportunity and, in turn, each additional municipal characteristic entered separately in "horse race" specifications.[20] Each characteristic is standardized to ease comparison across them.

Across these horse races, Realized Opportunity remains statistically significant in all specifications except the one that controls for the Gini index, which takes precedence. This pattern suggests that while social mobility and inequality are tightly linked, inequality in the area where refugee children grow up can, in some cases, subsume the predictive content of Realized Opportunity. At the same time, the magnitude of the coefficient on Realized Opportunity is larger than that on the competing municipal characteristic in 9 of the 11 comparisons, with the main exceptions being poverty and the Gini index. Table A4 further shows that, conditional on Realized Opportunity, children's adult income rank is also associated (to a lesser extent) with the share of non-Western immigrants in the area, the poverty rate, and the crime rate.

Tables A5 and A6 repeat the horse race exercise substituting Ongoing Opportunity for Realized Opportunity. The results are very similar, except that the coefficients on Ongoing Opportunity are generally larger in magnitude (e.g., 1.82 versus 1.45 without other municipal controls), and Ongoing Opportunity remains highly significant in every horse race regression, including the specification that controls for the Gini index. In terms of magnitudes, Ongoing Opportunity is the single strongest predictor of income rank across all 11 comparisons. Conditional on Ongoing Opportunity, only the share of non-Western immigrants and the crime rate remain statistically significant. It is worth noting, however, that Ongoing Opportunity reflects conditions when children are older, whereas the other municipal measures are defined at the time of arrival.

Additionally, Tables 12 and A7 repeat the horse race exercise with the number of criminal convictions by age 30 as the outcome and Realized Opportunity as the municipal mobility measure. Table 12 shows that Realized Opportunity remains significant in 9 of the 11 horse race specifications. Notably, Realized Opportunity remains significant when we add the municipal crime rate as a control and is larger in magnitude than the crime rate itself. This suggests that social mobility is relevant for crime outcomes above and beyond the local crime rate, which has been a central focus in prior work on this dispersal policy Damm and Dustmann (2014).

Finally, Tables 13 and A8 present estimates with parental income rank, measured when the child is aged 24–28, as the outcome. The results in Table 13 show that Real-

[20] As a supplement, Table A4 reports results from regressions of child income rank on Realized Opportunity and each municipal characteristic separately (i.e., including only one municipal variable at a time).

ized Opportunity remains significant in all regressions except when controlling for mean earnings in the municipality. These findings further strengthen the result that Realized Opportunity affects parental income rank and that this is part of the mechanism behind the effects on children. However, because the pattern of results in Table 13 differs clearly from the horse-race results for child income rank in Table 11, where the Gini index outperforms Realized Opportunity, the parental results suggest that the effect of Realized Opportunity on parental income is not the only mechanism behind our main findings for child outcomes.

6.4 Heterogeneous Treatment Effects

6.4.1 Heterogeneous Effects by Sex

The refugee experience and economic integration process can vary by sex, and labor-market and crime outcomes are known to differ substantially between boys and girls (Damm, 2014; Dustmann et al., 2024b; Foged et al., 2024b). We therefore explore heterogeneity by gender.

Table 14 splits the sample of refugee children into boys and girls and estimates the causal effects of Realized Opportunity on a subset of outcomes selected based on the main results in Section 6.2. Several differences emerge. First, the estimated effect on income rank at ages 26–30 appears larger for girls: a one-standard-deviation increase in Realized Opportunity raises girls' income rank by 1.70 points, compared with 1.26 for boys.[21] Second, the crime-reducing effect of Realized Opportunity is concentrated among boys, who have especially high crime rates. For boys, a one-standard-deviation increase in Realized Opportunity reduces the number of criminal convictions by 0.20 (highly significant), whereas the corresponding estimate for girls is -0.02 and statistically insignificant.

Third, higher Realized Opportunity increases boys' likelihood of obtaining a vocational degree: a one-standard-deviation increase in Realized Opportunity raises this probability by 1.4 percentage points (about 4.3 percent of the mean). For girls, the corresponding coefficient is close to zero and statistically insignificant. Fourth, higher Realized Opportunity reduces the probability that boys are placed in foster care: a one-standard-deviation increase lowers the probability of foster-care placement by 1.4 percentage points (about 16.2 percent of the mean), while the corresponding estimate for girls is essentially zero. This pattern is consistent with foster-care placement in this population being driven more by child behavior problems than by parental maltreatment, in which case siblings would often be placed together.

Finally, the results suggest that higher Realized Opportunity may reduce the probability that girls' highest completed schooling is only compulsory education: a 1 standard

[21] This is consistent with the similar finding in Table 9 discussed in Section 6.3.4.

deviation increase lowers this probability by 1.1 percentage points (about 3.27 percent of the mean), although the estimate is statistically significant only at the 10 percent level. For boys, the corresponding estimate is small and insignificant.

Taken together, higher Realized Opportunity benefits both boys and girls, but along different margins. Income gains at ages 26–30 are somewhat larger for girls, whereas reductions in criminal convictions and foster-care placement are concentrated among boys, who also experience higher uptake of vocational degrees. For girls, Realized Opportunity instead appears to modestly reduce the probability of ending schooling at the compulsory level. These patterns suggest that higher-opportunity areas improve long-run outcomes for both sexes through gender-specific channels.

6.4.2 Heterogeneous Effects by Parental Education

Another natural dimension of heterogeneity is parental education. Higher-educated, higher-earning families may be better equipped to take advantage of the opportunities available in higher-opportunity areas. We therefore investigate whether the effects of Realized Opportunity differ by the first-arriving parent's education level at the time of arrival.

Table 15 splits the sample into two groups based on whether the first-arriving parent has an academic education (high education) or less (low education). The estimates suggest that effects on child income rank at ages 26–30 are larger for children with highly educated parents. We also find that parents themselves benefit more from higher-opportunity areas when they are more educated upon arrival: a one-standard-deviation increase in Realized Opportunity raises parental income rank by 1.8 percentile points for the highly educated, compared with 0.9 percentile points for the less educated. The crime-reducing effect for children is also larger when the first-arriving parent is highly educated, with coefficients of -0.21 and -0.09, respectively.

The table further suggests that, among children with highly educated parents, higher Realized Opportunity may increase years of education and reduce the probability that the child's highest completed education is compulsory schooling. A one-standard-deviation increase in Realized Opportunity is associated with 0.17 additional years of education and a 2.1-percentage-point lower probability of completing only compulsory schooling (1.33 and 6.1 percent of the means, respectively), although these estimates are statistically significant only at the 10 percent level. For children with less-educated parents, the corresponding estimates are near zero and statistically insignificant.

For children with less-educated parents, higher Realized Opportunity may instead increase the likelihood of being married at age 30: a one-standard-deviation increase is associated with a 1.2-percentage-point increase in marriage (3.77 percent of the mean), whereas the corresponding estimate for children with highly educated parents is small

and insignificant. Finally, the reduction in foster-care placements appears concentrated among children with less-educated parents: a one-standard-deviation increase in Realized Opportunity lowers the probability of foster-care placement by 0.8 percentage points (about 10.94 percent of the mean), again significant only at the 10 percent level, with little corresponding effect among children with highly educated parents.

6.4.3 Heterogeneous Effects by Origins

A third demographic dimension of interest is country of origin. We group refugees into three broad categories based on the most common origin countries: (i) Africa, (ii) the Middle East, and (iii) Asia excluding the Middle East.[22] Table 16 reports estimates of the effects of Realized Opportunity, separately for each origin group, on child income rank at ages 26–30, parental income rank, and the number of criminal convictions by age 30—the outcomes significantly affected by Realized Opportunity in our main analysis.

The results suggest that the main findings are primarily driven by children originating from the Middle East, although part of the reduction in criminal convictions is also driven by children originating from Africa. For refugees from Africa, the point estimate on the crime outcome is considerably larger in magnitude than that for those from the Middle East (-0.46 versus -0.12), and the p-value for the difference (0.051) is borderline significant. The table also suggests that some of the effects on parental income rank may be driven by the Africa group, although this estimate is statistically significant only at the 10 percent level. In contrast, the results indicate that the main findings do not appear to be driven by effects for children originating from Asia outside the Middle East.

6.5 Robustness

We assess the robustness of our main results for child income rank, parental income rank, and criminal convictions in several ways, focusing on these outcomes because they were significantly affected by Realized Opportunity.

First, we examine the role of empirical Bayes shrinkage in constructing the opportunity measures. Table A9 reports the effects of Realized and Ongoing Opportunity on child income rank at ages 26–30, as well as the effects of Realized Opportunity on parental income rank and criminal convictions, estimated with and without shrinkage.[23] The estimated effects are essentially unchanged for both Realized and Ongoing Opportunity, indicating that our main findings are not an artifact of the shrinkage procedure.

[22] Our definition of the Middle East consists of the following countries: Abu Dhabi, Bahrain, Dubai, the United Arab Emirates, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, North Yemen, Oman, Palestine, Qatar, Saudi Arabia, Syria, Trucial Oman, Yemen, Middle East (unnamed country), and Turkey.

[23] We assess the robustness of the effects of Ongoing Opportunity on child income rank to applying (or not applying) shrinkage only, as child income rank is the only outcome for which we estimate effects of Ongoing Opportunity in our main analysis.

Second, we assess how results vary with the timing of the Realized Opportunity measure for the refugee children. In Table A10, we regress child income rank, parental income rank, and the number of criminal convictions on Realized Opportunity measured in the year of arrival (T), the year after arrival ($T+1$), and the year before arrival ($T-1$). Columns (1)–(3), (5)–(7), and (9)–(11) report estimates including each measure separately, while columns (4), (8), and (12) include all three measures in the same regression. Each measure is predictive when entered on its own (with the exception of the effect of $T+1$ on criminal convictions, which is significant only at the 10 percent level). When included jointly, however, Realized Opportunity measured at arrival dominates: it is the only measure that remains statistically significant for both child and parental income ranks.

Third, we examine sensitivity to the definition of municipalities. We reconstruct Realized Opportunity using the post-2007 municipal boundaries for the 98 municipalities created after the reform, and Table A11 reports results for child income rank, parental income rank, and criminal convictions using both the original and the alternative measure. Columns (1)–(2), (4)–(5), and (7)–(8) report estimates using each measure separately, while columns (3), (6), and (9) report horse races including both measures.[24] The coefficients are nearly identical across the two municipality definitions when each is entered alone. In the horse race for child income rank, the measure based on the post-reform boundaries dominates, whereas for parental income rank the measure based on the pre-reform boundaries dominates. These patterns likely reflect the fact that many children in our sample grew up after the 2007 municipal reform, even though their initial dispersal was defined by the pre-2007 boundaries, while the immediate local conditions captured by the pre-reform boundaries were more relevant for parents' early integration.

Fourth, we assess whether the main results are driven by Denmark's largest cities. In Table A12, we re-estimate the effects of Realized Opportunity on child income rank at ages 26–30, parental income rank, and the number of criminal convictions by age 30 after excluding refugee children assigned to the five largest cities (Copenhagen, Aarhus, Odense, Aalborg, and Esbjerg). The estimates change little, and the main findings remain robust to excluding these urban centers.

Lastly, we address the concern that Realized Opportunity is a generated regressor and that conventional standard errors might understate uncertainty by not fully accounting for estimation error in the opportunity measures. Table A13 therefore reports regressions of our main outcomes (child income rank at ages 26–30, parental income rank, and the number of criminal convictions by age 30) on Realized Opportunity, with standard errors computed using the clustered bootstrap. This alternative approach does not materially change the findings, and the clustered-bootstrap standard errors are in fact 13 to 25

[24]The number of clusters in Table A11 shows that our sample of refugee children was dispersed to only 93 of the 98 new municipalities.

percent smaller than the conventional clustered standard errors.[25]

7 Conclusion

A central theme in recent work on intergenerational mobility is that where children grow up is a policy-relevant input into human capital formation. Opportunity indices constructed from administrative data are increasingly being used to diagnose spatial inequality and to guide mobility and place-based programs. This paper shows that such measures can be constructed for Denmark, an egalitarian welfare state with high average social mobility, while still revealing substantial variation in local opportunity across municipalities. We document that our cohort-by-municipality measures of Realized and Ongoing Opportunity line up with familiar correlates such as local employment rates and inequality, that both absolute and relative mobility components matter, and that these measures are strongly predictive of adult outcomes for non-refugee movers. In this sense, the "opportunity maps" emphasized in recent policy discussions are applicable in Denmark.

We then ask whether these opportunity measures matter for a particularly disadvantaged group: refugee families who were quasi-randomly assigned to municipalities under Denmark's dispersal policy. The results indicate that among refugee children, assignment to higher-opportunity municipalities leads to economically meaningful improvements in long-run outcomes. Children placed in higher-opportunity areas reach higher positions in the income distribution in early adulthood, are more likely to be employed, and earn more in their early careers. We also find suggestive gains in educational attainment, particularly through a greater likelihood of completing vocational degrees, and sizable reductions in adverse outcomes: criminal convictions fall, especially for property crime, and the risks of foster-care placement and teenage motherhood are lower. The same opportunity measures predict better long-run outcomes for parents as well, consistent with higher-opportunity areas fostering improved economic integration for adults.

Our analyses help clarify what these opportunity measures are—and are not—capturing. Realized Opportunity is correlated with area employment, earnings, poverty, and the Gini index, but remains a strong predictor of refugee children's income and crime outcomes in horse-race specifications that include these and other municipal covariates. Ongoing Opportunity, which mirrors the mover-exposure literature more closely, yields even larger coefficients and likewise survives these horse races. Decomposing Realized Opportunity shows that both absolute and relative mobility components matter for refugee children's adult income. Alternative constructions—using only natives, only immigrants

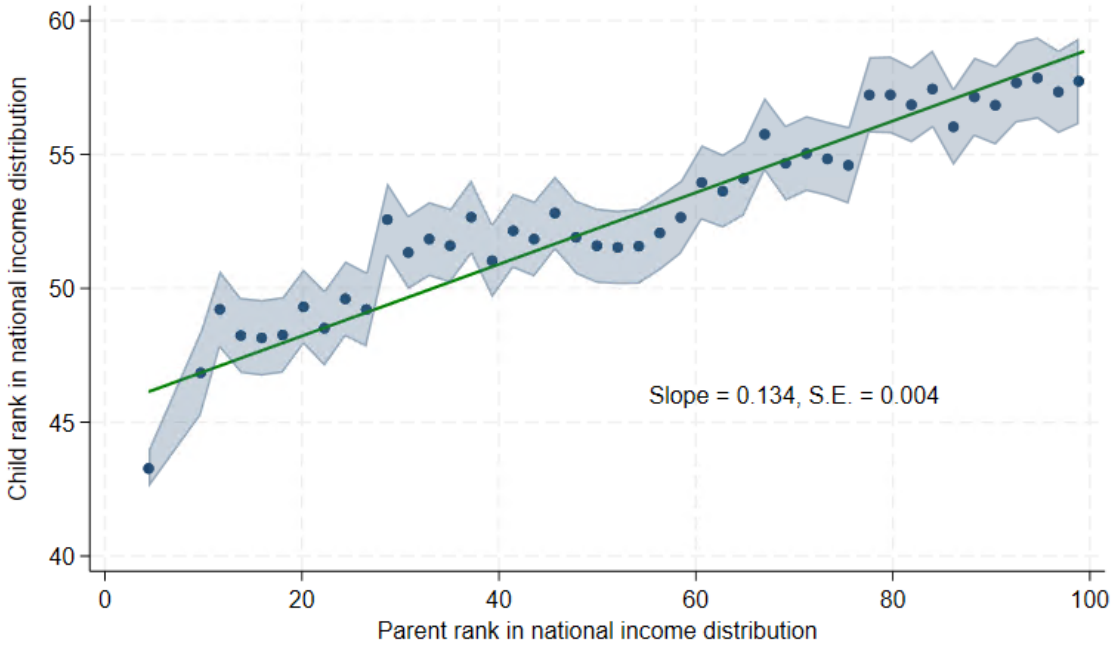
[25]That the results are qualitatively unaffected by accounting for uncertainty in the estimation of Realized Opportunity is unsurprising, because estimation error primarily arises from the sample of permanent residents used to construct the measure, which is separate from the refugee sample.

and descendants, or gender-specific measures—point in the same direction: the mobility rate for the child's own gender and for natives in the municipality appears particularly informative about refugees' prospects. Heterogeneity analyses indicate that higher opportunity reduces crime and foster-care placements especially for boys and children of less-educated parents, while income gains are somewhat larger for girls and for children of more-educated parents. The effects are concentrated among refugees from the Middle East and, for crime, from African origin countries.

There are several limitations to the analyses. First, our estimates are local to the refugees whose initial municipality was determined by the Danish dispersal policy and who remained in Denmark for at least 15 years, and thus need not generalize to other cohorts, other host countries, or voluntary movers. Second, although we study a wide range of outcomes—labor-market success, crime, foster care, and teenage childbearing—we do not observe all dimensions of refugee integration, such as mental health, social capital, or detailed school, language, or program inputs that might generate the effects we find. Finally, our estimates speak to the returns to reallocating refugees across existing municipalities, not to the effects of large-scale changes in the opportunity structure itself.

Even with these caveats, the findings have clear implications for both the opportunity and refugee-integration literatures. They show that opportunity measures derived from locals' intergenerational mobility rates are not merely descriptive statistics; when combined with quasi-random assignment, they have predictive and causal content for the long-run outcomes of a vulnerable migrant population. In practice, this suggests that settlement and place-based policies can be designed to exploit existing variation in local opportunity—by steering newly arrived families away from low-opportunity municipalities and toward places that historically foster upward mobility. More broadly, the results underscore that even in a generous welfare state, geography continues to shape life chances, and that using data on local opportunity can help align refugee policy, mobility programs, and investments in disadvantaged areas with the goal of improving long-run outcomes for children and their parents.

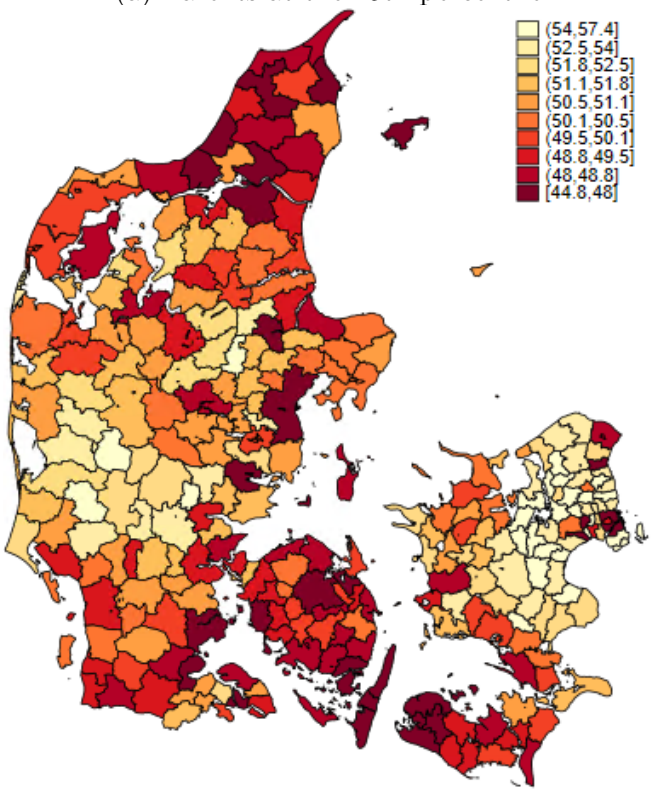
Figure 1: Mean Child Income Rank versus Parent Income Rank for Permanent Residents



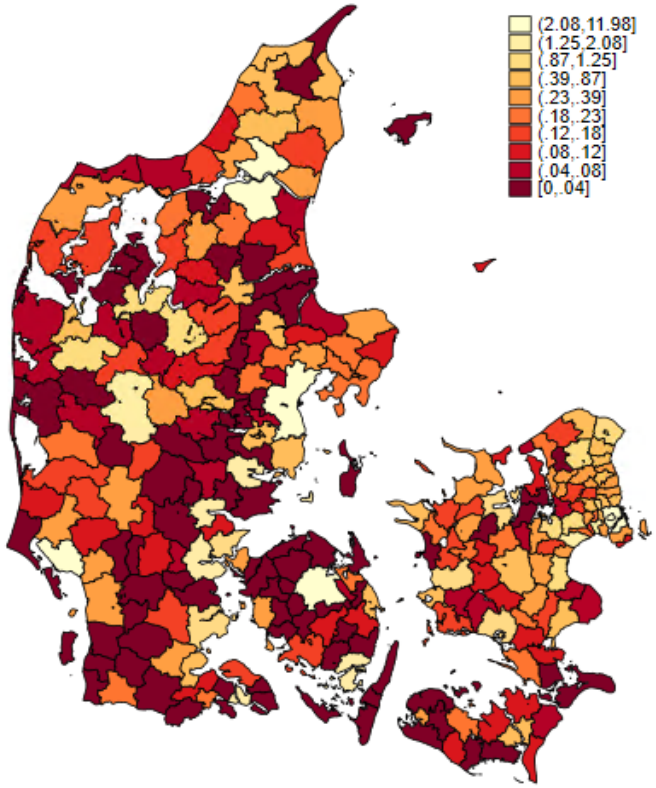
Notes: This figure presents a binned scatterplot of the relationship between parental rank and child rank in the national income distribution for sons and daughters in Denmark who were aged 30 in 1992. Child income is measured as labor income averaged over ages 26–30. Parental income is defined as the labor income of the primary parental earner, averaged over the years when the child was aged 24–28. The sample is restricted to "permanent residents," i.e., parents who lived in the same municipality throughout the parental income-averaging period. We implement the binned-scatter method of Cattaneo et al. (2024) with IMSE-optimal bins and 95 percent confidence bands that capture uncertainty in the estimated conditional mean function. The figure also overlays the OLS fit to the individual-level data; the reported standard error for the slope is heteroscedasticity-robust.

Figure 2: Mean Income Ranks for Children of Permanent Residents and Share of Refugees

(a) Parents at the 25th percentile

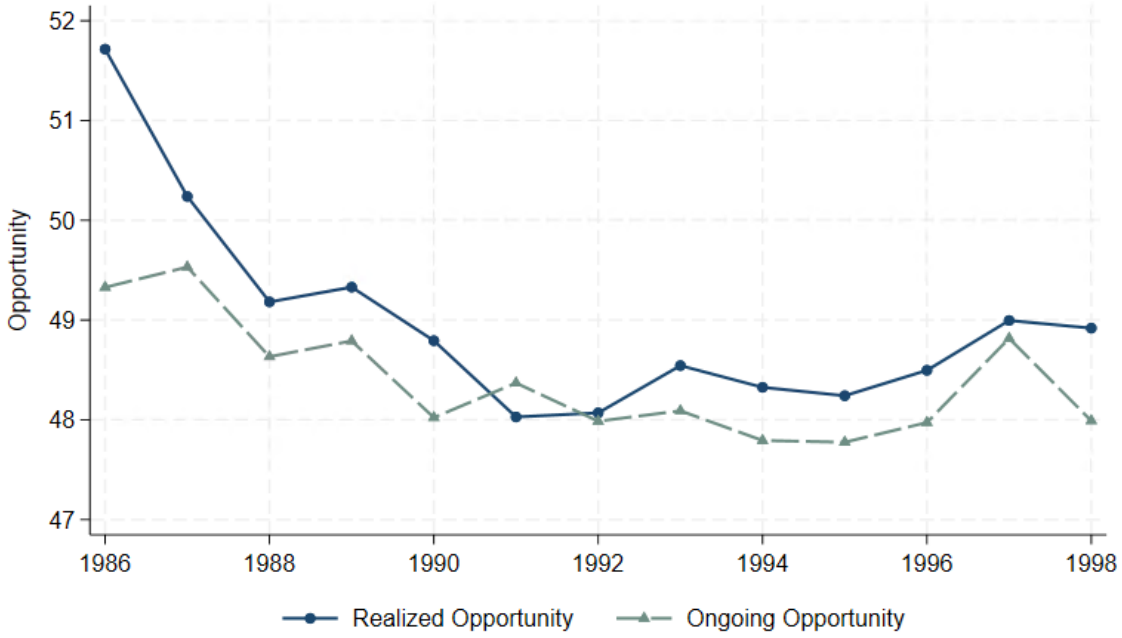


(b) Pct. of refugee children dispersed



Notes: This figure displays two maps of Denmark's municipalities under the pre-2007 municipal boundaries. Panel (a) shows the predicted national income rank, averaged over 1986–1998, at ages 26–30 for children whose parents were at the 25th percentile of the national income distribution ("Realized Opportunity"). Panel (b) shows, by municipality, the share of refugee children aged 0–17 at arrival who immigrated within one year of their parents' arrival and were subject to Denmark's 1986–1998 dispersal policy. The unweighted correlation between the two variables is -0.24.

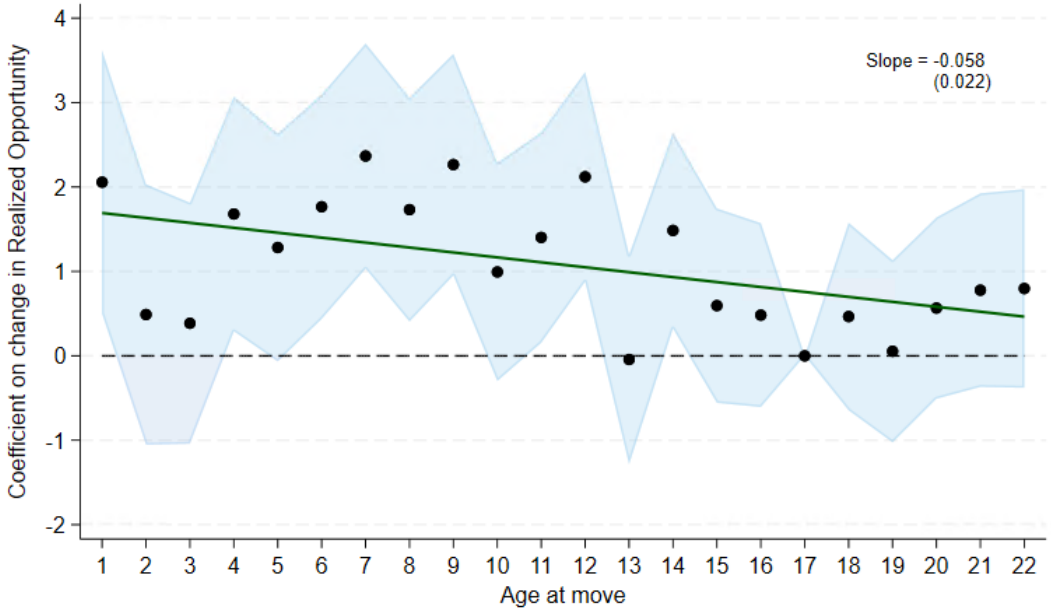
Figure 3: Realized and Ongoing Opportunity Over Time



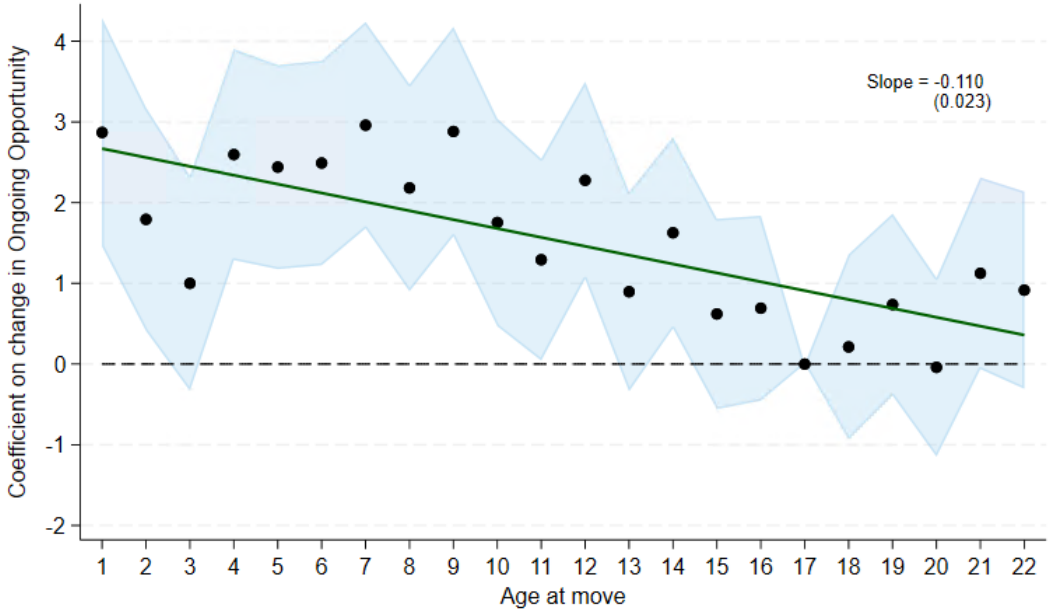
Notes: This figure shows developments in Realized and Ongoing Opportunity across arrival cohorts of refugee children aged 0–17 at arrival whose parents received asylum in Denmark between 1986 and 1998 and who were subject to the dispersal policy. Each dot shows the average value of the Opportunity measure for refugee children in the corresponding arrival cohort. Both measures in this figure are estimated without empirical Bayes shrinkage.

Figure 4: Age-Exposure Effects for Native Movers

(a) Realized Opportunity

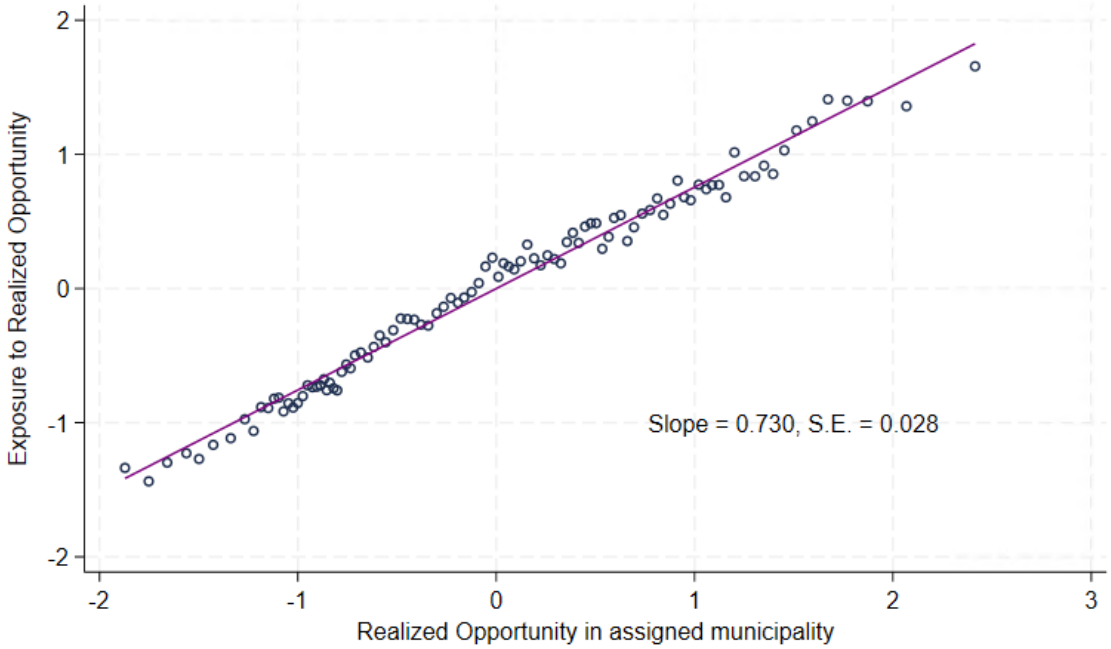


(b) Ongoing Opportunity



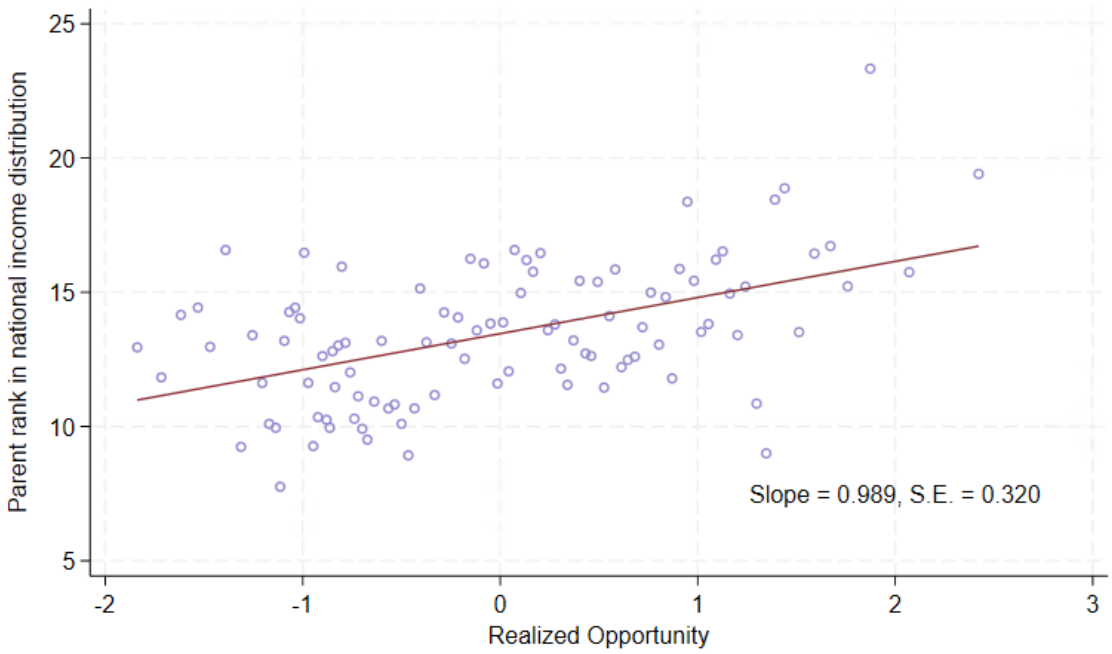
Notes: These figures present age-exposure effects, defined as the coefficients on the interaction between the standardized change in Realized or Ongoing Opportunity and age at move, from regressions of child income rank at ages 26–30 on the change in Realized or Ongoing Opportunity, age at move, and their interaction, controlling for child characteristics and family fixed effects. The sample includes natives (non-refugees) aged 0–22 whose parents moved once from one municipality to another before the child turned 23 during 1986–2014. Panel (a) reports results using Realized Opportunity, panel (b) reports results using Ongoing Opportunity, and Appendix Figure A8 reports results without family fixed effects. The interaction coefficient at age 17 is normalized to zero. The Opportunity measures are standardized and estimated with empirical Bayes shrinkage. Standard errors are clustered at the household level.

Figure 5: Actual Exposure to Realized Opportunity and Assigned Realized Opportunity



Notes: This figure presents a binned scatterplot of the relationship between exposure to Realized Opportunity in the municipality of residence up to age 25 and Realized Opportunity in the municipality of assignment. The sample consists of refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. The figure plots 100 binned means along with a fitted linear regression line. The fitted line is estimated controlling for year of arrival, country of origin, child characteristics (age at arrival and gender), and parental characteristics (age at arrival, gender of the first-arriving parent, and education measured at arrival). The measures of Realized Opportunity are standardized and estimated with empirical Bayes shrinkage. The reported standard error for the slope coefficient is clustered at the municipality level.

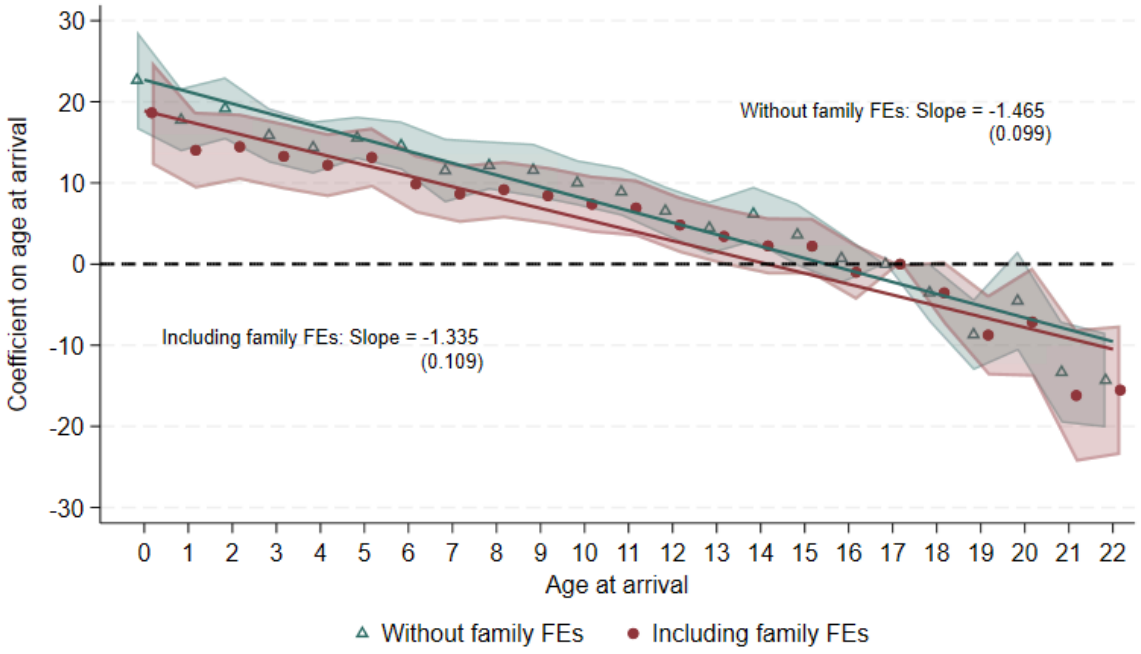
Figure 6: Mean Parent Income Rank versus Realized Opportunity



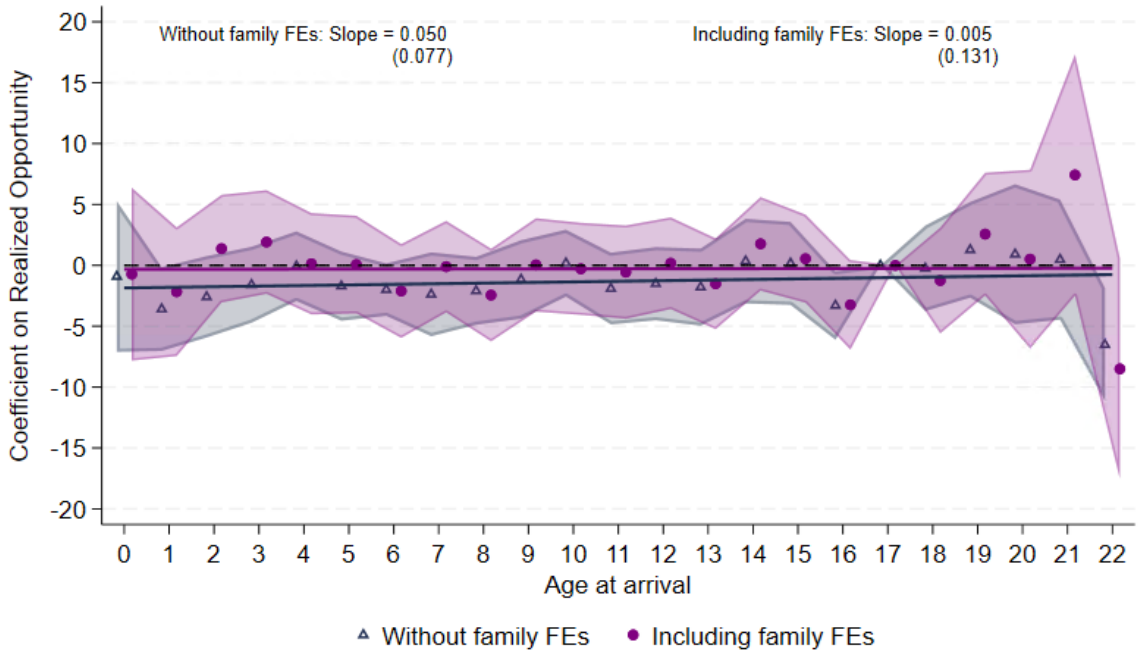
Notes: This figure presents a binned scatterplot of the relationship between Realized Opportunity and parental income rank for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Parental income is defined as the labor income of the primary parental earner, averaged over the years when the child was aged 24–28. The figure plots 100 binned means along with a fitted linear regression line. The fitted line is estimated controlling for year of arrival, country of origin, child characteristics (age at arrival and gender), and parental characteristics (age at arrival, gender of the first-arriving parent, and education measured at arrival). Realized Opportunity is standardized and estimated with empirical Bayes shrinkage. The reported standard error for the slope coefficient is clustered at the municipality level.

Figure 7: Age-at-Arrival Patterns for Refugees

(a) Child income ranks and Age-at-Arrival



(b) Effects of Realized Opportunity, by Age-at-Arrival



Notes: Estimates stem from regressions of child income rank at ages 26–30 on age at arrival, Realized Opportunity, and other child and parental characteristics. The sample consists of refugee children who arrived in Denmark at ages 0–22 within one year of their parents' arrival during 1986–1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival. The coefficient for Age 17 is normalized to zero. Panel A reports the coefficients on the age-at-arrival indicators. Panel B reports the coefficients on the interaction between the age-at-arrival indicators and Realized Opportunity. 95% confidence intervals are reported, using standard errors clustered at the municipality level in specifications without family fixed effects and at the family level in specifications with family fixed effects.

Table 1: Summary Statistics for the Population of Refugee Children

	(1) N	(2) Mean	(3) S.D.	(4) p5	(5) p95	(6) Min	(7) Max
Child characteristics							
Age, child	12,425	7.415	4.653	1.000	16.000	0.000	17.000
Male, child	12,425	0.543	0.498	0.000	1.000	0.000	1.000
Parental characteristics							
Age, parent	12,425	36.828	8.612	25.000	53.000	18.000	75.000
Male, parent	12,425	0.700	0.458	0.000	1.000	0.000	1.000
Married, parent	12,425	0.907	0.290	0.000	1.000	0.000	1.000
No. of kids, ages 0-2	12,425	0.459	0.627	0.000	2.000	0.000	3.000
No. of kids, ages 3-17	12,425	2.984	1.805	0.000	6.000	0.000	9.000
Unknown educ., parent	12,425	0.427	0.495	0.000	1.000	0.000	1.000
Basic educ., parent	12,425	0.255	0.436	0.000	1.000	0.000	1.000
Vocational educ., parent	12,425	0.131	0.338	0.000	1.000	0.000	1.000
Academic educ., parent	12,425	0.187	0.390	0.000	1.000	0.000	1.000
Municipality characteristics							
log(population)	12,425	10.903	1.224	8.994	13.052	8.376	13.102
% non-western immig.	12,425	2.507	1.799	0.495	6.027	0.059	11.813
% co-nationals	12,223	0.294	0.234	0.020	0.724	0.001	5.069
% with high-school	12,425	59.100	6.872	47.134	70.506	38.174	79.420
Employment rate	12,425	77.201	4.728	69.811	85.540	65.125	91.763
Mean earnings	12,425	28.805	3.637	25.011	36.097	22.462	48.674
Poverty rate	12,425	20.933	5.163	11.813	26.786	5.668	32.933
Gini coefficient	12,425	33.727	2.684	29.943	38.447	26.197	39.772
Crime rate	12,425	2.522	0.744	1.389	4.004	0.380	5.387
Foster care rate	12,425	0.370	0.164	0.124	0.648	0.000	1.051
% teen births	12,425	1.826	0.995	0.113	3.460	0.000	10.658
Realized Opportunity	12,425	49.125	2.546	45.173	53.466	43.870	56.423
Ongoing Opportunity	11,468	48.813	3.134	43.815	53.530	42.273	57.870
Outcomes							
Years of educ., child	10,462	12.317	2.810	9.000	17.000	0.000	20.000
Pr(Compulsory school, child)	10,573	0.393	0.488	0.000	1.000	0.000	1.000
Pr(High school, child)	10,573	0.104	0.305	0.000	1.000	0.000	1.000
Pr(Vocational educ., child)	10,573	0.353	0.478	0.000	1.000	0.000	1.000
Pr(Academic educ., child)	10,573	0.140	0.347	0.000	1.000	0.000	1.000
Pr(Employment at 26)	10,475	0.691	0.462	0.000	1.000	0.000	1.000
Earnings at 26-30	10,482	19.658	18.944	0.000	53.000	0.000	120.000
Pr(Married at 30)	11,018	0.316	0.465	0.000	1.000	0.000	1.000
Child income rank	10,482	38.807	28.185	4.463	92.243	2.981	99.501
Parental income rank	9,744	13.476	17.929	2.958	54.716	2.855	99.461
Pr(Crime convictions by 30)	12,425	0.365	0.481	0.000	1.000	0.000	1.000
Pr(Property offense by 30)	12,425	0.260	0.439	0.000	1.000	0.000	1.000
Pr(Violent assault by 30)	12,425	0.131	0.338	0.000	1.000	0.000	1.000
Pr(Other crime by 30)	12,425	0.064	0.246	0.000	1.000	0.000	1.000
No. of convictions by 30	12,425	1.636	4.039	0.000	10.000	0.000	40.000
No. of property offenses by 30	12,425	0.683	1.915	0.000	4.000	0.000	21.000
No. of violent assaults by 30	12,425	0.251	0.833	0.000	2.000	0.000	9.000
No. of other crimes by 30	12,425	0.702	2.092	0.000	4.000	0.000	22.000
Pr(Foster care by 18)	12,425	0.070	0.255	0.000	1.000	0.000	1.000
Pr(Teen motherhood by 19)	5,682	0.064	0.246	0.000	1.000	0.000	1.000

Notes: This table reports descriptive statistics for refugee children aged 0-17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and whose parents were subject to the dispersal policy. It presents the mean, standard deviation, 5th and 95th percentiles, and minimum and maximum values for child, parental, and municipality characteristics measured at arrival, along with later-life outcomes. Child outcomes at ages 26–30, except foster care and teen motherhood, which are measured by ages 18 and 19, respectively; and parental income rank measured when the child was aged 24-28. Crime outcomes are measured up to and including age 30. Teen motherhood only covers the subsample of girls. Parental characteristics are measured for the first-arriving parent. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4). Incomes are deflated to 2015 DKK using the Danish consumer price index and reported in USD at a fixed exchange rate of 7.76 DKK per USD. In this table, but not in the data used in subsequent analyses, percentiles for annual labor income are rounded to the nearest thousand dollars and top-coded at 120 to comply with Statistics Denmark's confidentiality requirements. Likewise, parental age at arrival is bottom- and top-coded at 18 and 75, respectively. The number of children aged 3-17 is top-coded at 9; counts of convictions, property crimes, violent assaults, and other crimes are top-coded at 40, 21, 9, and 22, respectively.

Table 2: Intergenerational Income Elasticity Estimates Across Countries

Country / Study	**Earnings Years**	**Q–Q Slope**
Denmark	1980–2022	0.13-0.16
USA (Chetty et al., 2014)	1996-2012	0.32-0.35
Netherlands (Beekers, 2024)	1995-2018	0.20–0.25
Australia (Deutscher & Mazumder, 2023)	1991-2015	0.215
Sweden (Bratberg et al., 2017)	1978-2007	0.215
Norway (Bratberg et al., 2017)	1978-2006	0.223
Germany (Bratberg et al., 2017)	1984-2012	0.245
Canada (Corak, 2020)	1978-2008	0.242
Italy (Acciari et al., 2022)	1998-2018	0.220
Brazil (Britto et al., 2024)	1991-2019	0.539

Notes: This table reports estimates of intergenerational income elasticities (Q-Q slopes) across countries. All estimates outside Denmark are drawn from published studies, and the source for each estimate is listed in the table. The estimates for Denmark correspond to the slope estimates shown in Figure 1 and Figure A2 in this paper.

Table 3: Descriptive Statistics for Native Movers

	(1) N	(2) Mean	(3) S.D.	(4) p5	(5) p95	(6) Min	(7) Max
Child characteristics							
Age, child	248,214	12.808	6.986	2.000	22.000	1.000	22.000
Male, child	248,214	0.507	0.500	0.000	1.000	0.000	1.000
Parental characteristics							
Age, parent	248,214	42.060	8.611	28.000	56.000	18.000	80.000
Male, parent	248,214	0.933	0.250	0.000	1.000	0.000	1.000
Married, parent	248,214	0.639	0.480	0.000	1.000	0.000	1.000
No. of kids, ages 0-2	248,214	0.211	0.455	0.000	1.000	0.000	4.000
No. of kids, ages 3-17	248,214	1.273	1.095	0.000	3.000	0.000	11.000
Unknown educ., parent	248,214	0.037	0.188	0.000	0.000	0.000	1.000
Basic educ., parent	248,214	0.319	0.466	0.000	1.000	0.000	1.000
Vocational educ., parent	248,214	0.388	0.487	0.000	1.000	0.000	1.000
Academic educ., parent	248,214	0.256	0.437	0.000	1.000	0.000	1.000
Municipality characteristics							
Change in Realized Opportunity	247,801	2.258	3.531	-5.481	6.301	-13.048	13.048
Change in Ongoing Opportunity	227,057	0.431	4.119	-6.591	7.353	-14.470	13.701
Outcomes							
Child income rank	248,214	52.260	27.957	6.204	95.325	2.783	99.501
Parent income rank	236,910	51.207	30.212	0.000	96.201	0.000	99.491

Notes: This table reports descriptive statistics for the sample of natives (non-refugees) aged 0–22 whose parents moved once from one municipality to another before the child turned 23 during 1986–2014, and for whom we observe income rank at ages 26–30. The table presents the mean, standard deviation, 5th and 95th percentiles, and the minimum and maximum values for child and parental characteristics, as well as changes in Realized and Ongoing Opportunity between origin and destination municipalities (with shrinkage). It also reports child income rank measured at ages 26–30 and parental income rank measured when the child was aged 24–28. In this table, to comply with Statistics Denmark disclosure requirements (but not in the data used for further analysis), parental ages are bottom- and top-coded at 18 and 80, respectively.

Table 4: Balancing Tests for Refugee Children

Dependent var.:	(1) Realized Opportunity
Unobserved at Time of Allocation	
Unknown educ., parent	-0.144
	(0.123)
Basic educ., parent	-0.173
	(0.130)
Academic educ., parent	-0.171
	(0.138)
Observed at Time of Allocation	
Age, parent	-0.004
	(0.005)
Male, parent	0.054
	(0.093)
Married, parent	-0.345**
	(0.137)
No. of children, ages 0-2	-0.053
	(0.072)
No. of children, ages 3-17	0.017
	(0.027)
Age, child	-0.008
	(0.006)
Male, child	0.090**
	(0.043)
Observations	12,415
Households	5,555
Unobserved chars.: $Pr > F$	0.560
Observed chars.: $Pr > F$	0.067
Mean of dep. var	49.12
SD of dep. var.	2.546

*Notes: This table presents balance tests of municipality-level Realized Opportunity on child and parental attributes for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. All variables are measured at arrival. Some were unobserved by the Danish Refugee Council when making allocation decisions about how refugees were dispersed across municipalities, while others were observable. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4). $Pr > F$ reports the p-value from an F-test of the joint insignificance of the indicated set of variables. The educational-attainment dummies are basic education, academic education, and unknown education, with vocational education as the omitted reference category. Realized Opportunity is without empirical Bayes shrinkage. All regressions control for year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the household level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 5: Estimated Effects on Income Rank at ages 26-30

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Income rank at 26-30
Realized Opportunity	1.775***	1.593***	1.563***	1.451***	1.463***
	(0.478)	(0.374)	(0.359)	(0.333)	(0.331)
Parental characteristics observed by DRC					
Age, parent			-0.259***	0.008	0.008
			(0.041)	(0.042)	(0.044)
Male, parent			2.612***	0.956	0.878
			(0.964)	(0.924)	(0.936)
No. of children, ages 0-2			-0.561	-2.433***	-2.380***
			(0.543)	(0.518)	(0.523)
No. of children, ages 3-17			-1.622***	-1.095***	-1.085***
			(0.154)	(0.168)	(0.169)
Married			0.427	0.231	0.021
			(0.929)	(0.897)	(0.914)
Child characteristics					
Age, child				-1.143***	-1.141***
				(0.072)	(0.072)
Male, child				7.002***	7.041***
				(0.584)	(0.588)
Parental characteristics unobserved by DRC					
Unknown educ.					0.530
					(0.909)
Basic educ.					0.661
					(1.024)
Academic educ.					3.373***
					(1.291)
Observations	10,474	10,474	10,474	10,474	10,474
R-squared	0.006	0.048	0.067	0.102	0.103
Clusters	213	213	213	213	213
Mean dep. var	38.79	38.79	38.79	38.79	38.79
Year of arrival FE	Yes	Yes	Yes	Yes	Yes
Country of origin FE	No	Yes	Yes	Yes	Yes

*Notes: This table reports regression estimates of child income rank at ages 26–30 on Realized Opportunity in the municipality of assignment, with various sets of controls, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Each column reports results from a separate regression and all regressions control for year-of-arrival fixed effects. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 6: Main Results on Education and Labor Market Outcomes

Dependent var.:	(1) Years of schooling	(2) Pr(Compulsory school)	(3) Pr(High school)	(4) Pr(Vocational degree)	(5) Pr(Academic degree)	(6) Pr(Employed at 26)	(7) Earnings at 26-30	(8) Pr(Married at 30)
Realized Opportunity	0.071	-0.012	0.001	0.011*	0.002	0.020***	0.863***	0.008
	(0.049)	(0.007)	(0.004)	(0.006)	(0.007)	(0.005)	(0.196)	(0.006)
Observations	10,454	10,565	10,565	10,565	10,565	10,467	10,474	11,009
R-squared	0.172	0.124	0.021	0.028	0.092	0.064	0.082	0.109
Clusters	212	212	212	212	212	213	213	212
Mean dep. var	12.32	0.393	0.104	0.353	0.139	0.691	19.65	0.316

*Notes: This table presents regression estimates of child outcomes - education, employment, and income - on Realized Opportunity in the municipality of assignment for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Column-specific sample sizes reflect outcome-specific data availability and the age at which the outcome is measured. Education is measured at age 30; employment is defined as having positive labor income at age 26; earnings at ages 26–30 are calculated as average labor income over those years and are measured in thousands of USD; and marriage is measured as whether the individual is married at age 30. All regressions control for year-of-arrival and country-of-origin fixed effects in addition to the parental and child characteristics from the balancing tests. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 7: Main Results on Crime, Foster Care and Teen Motherhood Outcomes

	P(crime)				Number of crimes					
Dependent var.:	(1) All crime	(2) Property crime	(3) Violent crime	(4) Other crime	(5) All crime	(6) Property crime	(7) Violent crime	(8) Other crime	(9) Pr(Foster care)	(10) Pr(Teen motherhood)
Realized Opportunity	-0.005	-0.007	-0.007	0.001	-0.113***	-0.058***	-0.014	-0.041	-0.007*	-0.005*
	(0.007)	(0.006)	(0.004)	(0.003)	(0.042)	(0.020)	(0.010)	(0.025)	(0.004)	(0.003)
Observations	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	5,671
R-squared	0.194	0.116	0.125	0.036	0.135	0.081	0.097	0.121	0.024	0.061
Clusters	215	215	215	215	215	215	215	215	215	204
Mean dep. var	0.365	0.260	0.131	0.0643	1.637	0.683	0.251	0.703	0.07	0.065

*Notes: This table presents regression estimates of child criminal conviction outcomes, as well as the probability of foster care and teen motherhood, on Realized Opportunity in the municipality of assignment for refugee children who arrived in Denmark between 1986 and 1998 at ages 0–17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Column-specific sample sizes reflect outcome-specific data availability and the age at which the outcome is measured. Crime outcomes are measured up to and including age 30, foster care is measured before age 18, and teen motherhood is defined as giving birth at age 19 or earlier. Teen motherhood is only estimated for the subsample of girls. All regressions control for year-of-arrival and country-of-origin fixed effects in addition to the parental and child characteristics from the balancing tests. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 8: Heterogeneous Effects Across Age-at-Arrival Groups

Age group:	0-5	6-11	12-17	18-22	0-5	6-11	12-17	18-22
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent var.:	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	No. criminal convictions	No. criminal convictions	No. criminal convictions	No. criminal convictions
Realized Opportunity	1.029**	1.515***	1.844***	2.826***	-0.112*	-0.229***	0.055	-0.204***
	(0.461)	(0.483)	(0.547)	(1.023)	(0.061)	(0.066)	(0.086)	(0.068)
Observations	3,447	4,284	2,726	560	5,081	4,539	2,781	568
R-squared	0.060	0.096	0.163	0.268	0.157	0.148	0.106	0.218
Clusters	195	201	184	106	206	201	184	107
Mean dep. var	43.47	39.31	32.10	23.08	43.46	39.31	32.10	23.08

*Notes: This table reports regression estimates of child income rank at ages 26–30 and parental income rank (measured at ages 24–28) on Realized Opportunity. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4), and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Estimates are reported separately for refugee children who arrived at ages 0–5, 6–11, 12–17, and 18–22, and who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. The regressions also control for the full set of child and parental characteristics from our balancing tests, along with year-of-arrival and country-of-origin fixed effects. See Table B8, in Appendix B, for an extended table that also reports the point estimates for the control variables. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 9: Child Income Rank Regressed on Alternative Measures of Opportunity

Sample:	All	All	All	Boys	Girls	All
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent var.:	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30
Realized Opportunity, immig. & desc.	1.475***		0.920**			
	(0.412)		(0.357)			
Realized Opportunity, natives		1.519***	1.127***			
		(0.419)	(0.349)			
Realized Opportunity, Boys				1.000**	0.523	
				(0.485)	(0.384)	
Realized Opportunity, Girls				0.414	1.571***	
				(0.493)	(0.404)	
α from Realized Opportunity						2.735***
						(0.470)
ψ from Realized Opportunity						1.999***
						(0.447)
Observations	3,505	3,505	3,505	5,820	4,640	10,474
R-squared	0.130	0.130	0.131	0.070	0.166	0.104
Clusters	31	31	31	208	200	213
Mean dep. var	37.23	37.23	37.23	41.84	34.93	38.79
Individual-level controls	Yes	Yes	Yes	Yes	Yes	Yes

*Notes: This table reports regression estimates of child income rank (averaged over ages 26–30) on municipality-level measures of Opportunity for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. All explanatory variables are measured at arrival and estimated with empirical Bayes shrinkage. The regressions control for the full set of child and parental characteristics from our balancing tests, along with year-of-arrival and country-of-origin fixed effects. The sample in columns (1)–(3) is restricted to refugees dispersed to municipalities for which it was possible to estimate Realized Opportunity based on immigrants/descendants who were permanent residents in the municipality, and for which the measure could be estimated using at least 10 observations. In columns (4) and (5), the samples are boys and girls, respectively. Column (6) reports results for the main refugee sample. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 10: Correlation of Realized Opportunity with Other Municipality Characteristics

Specification:	Bivariate	Multivariate	Post-LASSO OLS	Variable Mean / S.D.
Dependent var.:	(1) Realized Opportunity	(2) Realized Opportunity	(3) Realized Opportunity	(4)
$log(Pop.)$	-1.273***	-0.205		10.925
	(0.100)	(0.156)		[1.219]
% non-western immig.	-0.612***	-0.132		2.520
	(0.161)	(0.098)		[1.789]
% co-nationals	-2.517***	-0.152		0.294
	(0.424)	(0.172)		[0.234]
% with high-school	-0.065	-0.032		59.145
	(0.047)	(0.042)		[6.855]
Employment rate	0.435***	0.208***	0.304***	77.159
	(0.028)	(0.059)	(0.031)	[4.719]
Mean earnings	0.441***	0.277***		28.784
	(0.061)	(0.083)		[3.635]
Poverty rate	-0.347***	0.123***		21.001
	(0.035)	(0.037)		[5.153]
Gini coefficient	-0.647***	-0.282***	-0.317***	33.757
	(0.091)	(0.075)	(0.057)	[2.687]
Crime rate	-0.349	0.156		2.524
	(0.358)	(0.157)		[0.741]
% in foster care	-2.555	0.548		0.371
	(1.579)	(0.554)		[0.163]
% teen births	-0.242	0.089		1.831
	(0.191)	(0.087)		[0.991]
Observations	12,223	12,223	12,223	12,223
Municipalities	212	212	212	212
Mean dep. var	49.10	49.10	49.10	
Year FE	Yes	Yes	Yes	
R-squared		0.700	0.665	
F-stat		40.09	158.2	
$Pr > F$		0.00	0.00	

*Notes: This table presents regression estimates of Realized Opportunity on municipality-level characteristics in the main sample of refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is without empirical Bayes shrinkage. Column (1) reports coefficients from bivariate regressions, and column (2) reports results from a multivariate regression. Column (3) presents results from a post-LASSO OLS procedure, in which LASSO is first used to select the most predictive variables and the selected variables are then included in a subsequent OLS specification. Column (4) reports the mean and standard deviation of each municipality characteristic. Robust standard errors, clustered at the municipality level, are reported in parentheses beneath each regression coefficient. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 11: Horse Race Regressions with Realized Opportunity

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Income rank at 26-30	(6) Income rank at 26-30	(7) Income rank at 26-30	(8) Income rank at 26-30	(9) Income rank at 26-30	(10) Income rank at 26-30	(11) Income rank at 26-30	(12) Income rank at 26-30
Realized Opportunity	1.447***	0.980***	1.768***	1.388***	1.417***	1.299***	0.964**	0.663*	0.521	1.532***	1.483***	1.504***
	(0.327)	(0.363)	(0.352)	(0.327)	(0.310)	(0.477)	(0.417)	(0.391)	(0.443)	(0.286)	(0.330)	(0.320)
log(Pop.)		-0.720										
		(0.466)										
% non-western immig.			0.931**									
			(0.465)									
% co-nationals				-0.090								
				(0.405)								
% with high-school					-0.241							
					(0.482)							
Employment rate						0.215						
						(0.529)						
Mean earnings							0.762					
							(0.481)					
Poverty rate								-1.206**				
								(0.569)				
Gini index									-1.365***			
									(0.440)			
Crime rate										0.780**		
										(0.317)		
Foster care rate											0.254	
											(0.332)	
% teen births												0.583
												(0.417)
Observations	10,474	10,474	10,474	10,304	10,474	10,474	10,474	10,474	10,474	10,474	10,474	10,474
R-squared	0.103	0.104	0.104	0.103	0.103	0.103	0.104	0.104	0.104	0.104	0.103	0.104
Clusters	213	213	213	210	213	213	213	213	213	213	213	213
Mean dep. var	38.79	38.79	38.79	38.77	38.79	38.79	38.79	38.79	38.79	38.79	38.79	38.79

*Notes: This table presents regression estimates of child income rank (averaged over ages 26–30) on Realized Opportunity and other municipality-level characteristics for refugee children aged 0-17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. All explanatory variables are measured at the time of arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 12: Horse Race Regressions for Crime with Realized Opportunity

Dependent var.:	(1) No. criminal convictions	(2) No. criminal convictions	(3) No. criminal convictions	(4) No. criminal convictions	(5) No. criminal convictions	(6) No. criminal convictions	(7) No. criminal convictions	(8) No. criminal convictions	(9) No. criminal convictions	(10) No. criminal convictions	(11) No. criminal convictions	(12) No. criminal convictions
Realized Opportunity	-0.113***	-0.086	-0.107**	-0.108**	-0.104**	-0.100	-0.164***	-0.110*	-0.124*	-0.104***	-0.106**	-0.113***
	(0.042)	(0.061)	(0.045)	(0.047)	(0.042)	(0.067)	(0.054)	(0.063)	(0.066)	(0.040)	(0.041)	(0.042)
log(Pop.)		0.041										
		(0.072)										
% non-western immig.			0.016									
			(0.054)									
% co-nationals				0.014								
				(0.049)								
% with high-school					0.066							
					(0.066)							
Employment rate						-0.020						
						(0.083)						
Mean earnings							0.080					
							(0.049)					
Poverty rate								0.005				
								(0.074)				
Gini index									-0.016			
									(0.071)			
Crime rate										0.083*		
										(0.044)		
Foster care rate											0.047	
											(0.045)	
% teen births												0.006
												(0.044)
Observations	12,415	12,415	12,215	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415
R-squared	0.135	0.135	0.135	0.135	0.135	0.135	0.136	0.135	0.135	0.136	0.135	0.135
Clusters	215	215	215	212	215	215	215	215	215	215	215	215
Mean dep. var	1.637	1.637	1.637	1.638	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637

*Notes: This table reports regression estimates of the number of criminal convictions (measured up to and including age 30) on Realized Opportunity and other municipality-level characteristics for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 13: Horse Race Regressions for Parental Income Rank with Realized Opportunity

Dependent var.:	(1) Parental income rank	(2) Parental income rank	(3) Parental income rank	(4) Parental income rank	(5) Parental income rank	(6) Parental income rank	(7) Parental income rank	(8) Parental income rank	(9) Parental income rank	(10) Parental income rank	(11) Parental income rank	(12) Parental income rank
Realized Opportunity	0.982***	1.316***	1.170***	0.943***	1.041***	1.126**	0.585	0.898**	0.810**	1.039***	1.061***	1.036***
	(0.317)	(0.376)	(0.343)	(0.323)	(0.317)	(0.465)	(0.377)	(0.361)	(0.411)	(0.303)	(0.299)	(0.322)
log(Pop.)		0.513										
		(0.383)										
% non-western immig.			0.545									
			(0.396)									
% co-nationals				-0.156								
				(0.352)								
% with high-school					0.468							
					(0.414)							
Employment rate						-0.208						
						(0.503)						
Mean earnings							0.624*					
							(0.376)					
Poverty rate								-0.129				
								(0.431)				
Gini index									-0.252			
									(0.387)			
Crime rate										0.536*		
										(0.282)		
Foster care rate											0.570**	
											(0.281)	
% teen births												0.537*
												(0.324)
Observations	9,735	9,735	9,735	9,574	9,735	9,735	9,735	9,735	9,735	9,735	9,735	9,735
R-squared	0.184	0.184	0.184	0.185	0.184	0.184	0.185	0.184	0.184	0.185	0.185	0.185
Clusters	212	212	212	210	212	212	212	212	212	212	212	212
Mean dep. var.	13.45	13.45	13.45	13.39	13.45	13.45	13.45	13.45	13.45	13.45	13.45	13.45

*Notes: This table reports regression estimates of parental income rank, measured using the labor income of the primary parental earner and averaged when the child is aged 24-28, on Realized Opportunity and other municipality-level characteristics for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 14: Heterogeneous Effects Across Genders

Dependent var.:	(1) Income rank at 26-30	(2) Years of schooling	(3) Pr(Compulsory school)	(4) Pr(High school)	(5) Pr(Vocational degree)	(6) Pr(Academic degree)	(7) Pr(Married at 30)	(8) Pr(Criminal conviction)	(9) No. criminal convictions	(10) Pr(Foster care)
Panel A: Boys										
Realized Opportunity	1.258***	0.067	-0.012	0.001	0.014**	-0.002	0.006	-0.006	-0.195***	-0.014***
	(0.449)	(0.058)	(0.010)	(0.004)	(0.007)	(0.008)	(0.006)	(0.011)	(0.074)	(0.005)
Observations	5,820	5,751	5,813	5,813	5,813	5,813	6,034	6,731	6,731	6,731
R-squared	0.070	0.131	0.102	0.028	0.032	0.069	0.090	0.072	0.084	0.025
Clusters	208	207	207	207	207	207	207	210	210	210
Mean dep. var	41.84	12.03	0.440	0.105	0.325	0.119	0.245	0.540	2.766	0.0863
Panel B: Girls										
Realized Opportunity	1.711***	0.077	-0.011*	0.001	0.008	0.006	0.009	-0.003	-0.019	0.001
	(0.363)	(0.048)	(0.006)	(0.007)	(0.010)	(0.007)	(0.009)	(0.006)	(0.016)	(0.004)
Observations	4,640	4,686	4,735	4,735	4,735	4,735	4,960	5,671	5,671	5,671
R-squared	0.166	0.224	0.158	0.026	0.033	0.123	0.085	0.029	0.019	0.034
Clusters	200	200	200	200	200	200	204	204	204	204
Mean dep. var	34.93	12.66	0.336	0.102	0.387	0.165	0.402	0.156	0.299	0.0503

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity. Estimates are reported separately for boys (Panel A) and girls (Panel B) among refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4), and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. The regressions control for the full set of child and parental characteristics used in our balancing tests, along with year-of-arrival and country-of-origin fixed effects. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. See Table B3 & B4, in Appendix B, for extended tables that includes the point estimates for the control variables. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 15: Heterogeneous Effects by Parental Education Level (High vs. Low)

Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Pr(Criminal conviction)	(5) Years of schooling	(6) Pr(Compulsory school)	(7) Pr(High school)	(8) Pr(Vocational degree)	(9) Pr(Academic degree)	(10) Pr(Married at 30)	(11) Pr(Foster care)	(12) Pr(Teenage motherhood)
Panel A: High education												
Realized Opportunity	2.225***	1.764***	-0.211***	-0.015	0.170*	-0.021*	0.001	0.006	0.015	-0.008	-0.005	-0.010
	(0.905)	(0.745)	(0.072)	(0.010)	(0.089)	(0.011)	(0.006)	(0.008)	(0.013)	(0.011)	(0.005)	(0.007)
Observations	1,946	1,844	2,319	2,319	1,948	1,965	1,965	1,965	1,965	2,073	2,319	1,080
R-squared	0.116	0.177	0.156	0.195	0.189	0.128	0.024	0.045	0.122	0.108	0.039	0.076
Clusters	152	151	156	156	153	153	153	153	153	153	156	142
Mean dep. var	41.39	15.45	1.571	0.354	12.74	0.344	0.117	0.333	0.197	0.307	0.0552	0.0611
Panel B: Low education												
Realized Opportunity	1.280***	0.894**	-0.090**	-0.003	0.045	-0.010	0.001	0.012	-0.002	0.012*	-0.008*	-0.004
	(0.289)	(0.352)	(0.044)	(0.007)	(0.050)	(0.009)	(0.004)	(0.008)	(0.006)	(0.007)	(0.004)	(0.004)
Observations	8,522	7,885	10,091	10,091	8,501	8,595	8,595	8,595	8,595	8,931	10,091	4,585
R-squared	0.104	0.213	0.137	0.199	0.171	0.127	0.025	0.031	0.084	0.113	0.027	0.062
Clusters	211	210	213	213	211	211	211	211	211	211	213	201
Mean dep. var	38.19	10.87	1.653	0.367	12.22	0.404	0.101	0.357	0.126	0.318	0.0731	0.0654

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4), and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. Estimates are reported separately by parental education at arrival—high versus low (academic versus non-academic education; Panels A and B, respectively)—for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Foster care is measured before age 18, and teenage motherhood is defined as giving birth at age 19 or earlier. Teenage motherhood is estimated only for the subsample of girls. The regressions control for the full set of child and parental characteristics used in our balancing tests, along with year-of-arrival and country-of-origin fixed effects. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. See Table B5 & B6, in Appendix B, for extended tables that includes the point estimates for the control variables. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table 16: Heterogeneous Effects Across Country-of-Origin Groups

	Africa			Middle East			Asia, excluding the Middle East		
Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Income rank at 26-30	(5) Parental income rank	(6) No. criminal convictions	(7) Income rank at 26-30	(8) Parental income rank	(9) No. criminal convictions
Realized Opportunity	1.264	2.419*	-0.464***	1.558***	0.945***	-0.118**	1.160	0.619	0.054
	(0.992)	(1.377)	(0.133)	(0.355)	(0.319)	(0.053)	(0.798)	(0.619)	(0.044)
Observations	1,054	923	1,422	6,711	6,284	7,945	2,635	2,461	2,950
R-squared	0.081	0.302	0.191	0.110	0.156	0.131	0.058	0.227	0.078
Clusters	86	82	96	183	181	187	151	149	154
Mean dep. var	32.48	14.02	2.525	37.10	11.95	1.865	45.60	16.84	0.618

*Notes: This table reports regression estimates of child income rank at ages 26-30, parental income rank at ages 24-28, and the number of criminal convictions up to and including age 30 on Realized Opportunity for refugee children who arrived in Denmark between 1986 and 1998 at ages 0-17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4), and is standardized to have mean zero and standard deviation one. Realized Opportunity is with empirical Bayes shrinkage. The sample is split into three origin groups: Africa, the Middle East, and Asia (excluding the Middle East). The regressions control for the full set child and parental characteristics from our balancing tests, along with year-of-arrival and country-of-origin fixed effects. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. See Table B7, in Appendix B, for an extended table including the point estimates for the control variables. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Supplemental Appendix

Heterogeneity by Age at Arrival

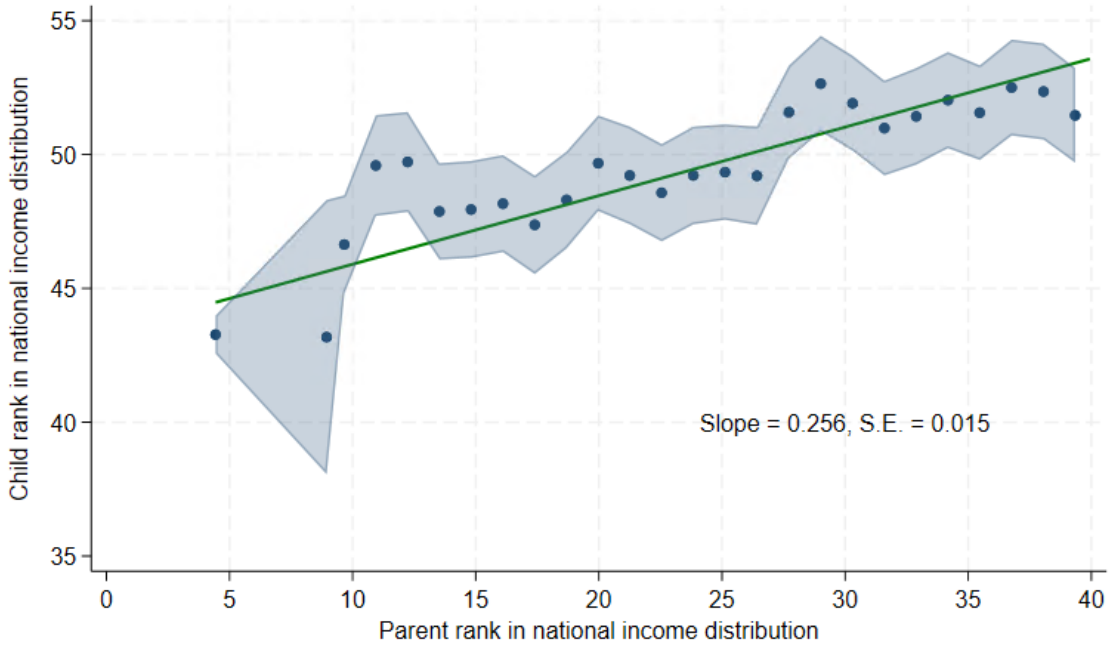
The heterogeneous effects of moving to areas at different ages are of interest, as they are informative about the optimal targeting of policies aimed at improving social mobility among children. We expand the sample to include refugee children who arrived with their parents at ages up to 22 in order to examine impacts beyond childhood. This expansion is constructed analogously to our baseline sample of children aged 0–17 at arrival.

We start by presenting the coefficients on age at arrival, entered as a categorical variable, from a regression analogous to our main specification in equation (4). This regression relates child income rank at ages 26–30 to Realized Opportunity, includes the full set of controls, and adds age dummies with age 17 as the reference category. These age coefficients are of interest because they can be interpreted as the consequences of immigrating to Denmark at different ages, and thus experiencing different levels of exposure to opportunity in Denmark. Specifically, we plot the estimates of τ_a and ω_a in equation (5):

$$\begin{aligned} y_{imoT} = \beta_0 + \sum_{\substack{a=0 \\ a \neq 17}}^{22} \tau_a \, \mathbf{1}\{a_i = a\} + \beta_1 \, \hat{y}_{25,ms(T)} \\ + \sum_{\substack{a=0 \\ a \neq 17}}^{22} \omega_a \, \mathbf{1}\{a_i = a\} \, \hat{y}_{25,ms(T)} + \zeta X_{iT} + \kappa_T + \mu_o + u_{imoT}, \end{aligned} \tag{5}$$

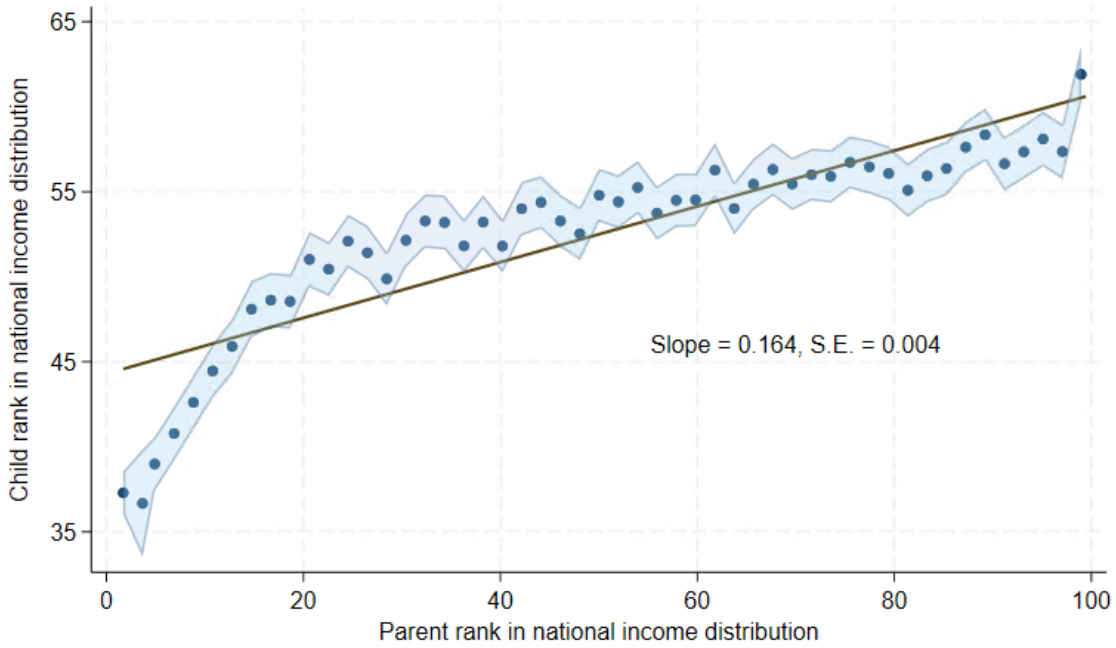
Appendix Tables and Figures

Figure A1: Income Rank vs. Parental Income Rank (40th Percentile or Below)



Notes: This figure presents a binned scatterplot of the relationship between parental income rank and child income rank in the national income distribution for sons and daughters in Denmark who were aged 30 in 1992 and whose parents were at or below the 40th percentile of the national income distribution. Child income is measured as labor income averaged over ages 26–30. Parental income is defined as the labor income of the primary parental earner, averaged over the years when the child was aged 24–28. The sample is restricted to "permanent residents," defined as parents who lived in the same municipality throughout the parental income-averaging period. We implement the binned-scatter method of (Cattaneo et al., 2024) with IMSE-optimal bins and 95 percent confidence bands that capture uncertainty in the estimated conditional mean function. The figure also overlays the OLS fit to the individual-level data; the reported standard error for the slope is heteroskedasticity-robust.

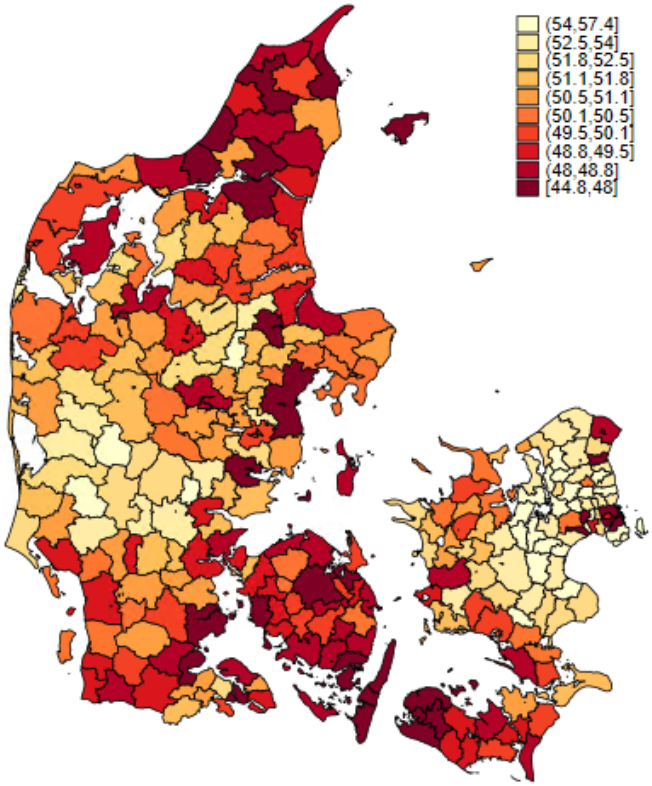
Figure A2: Child Income Rank versus Parents for Permanent Residents, Ongoing Opportunity



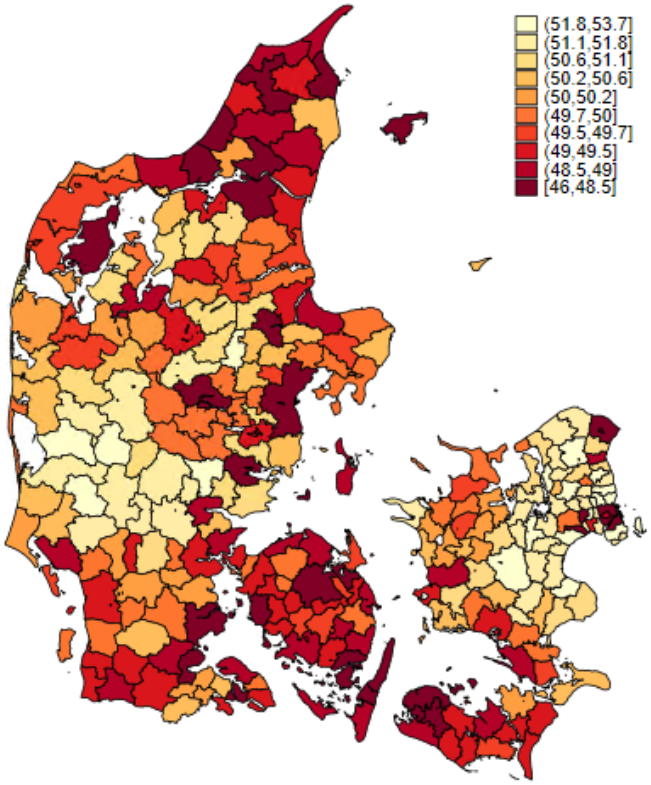
Notes: This figure presents a binned scatterplot of the relationship between parental rank and child rank in the national income distribution for sons and daughters in Denmark born in 1991. Child income is measured as labor income averaged over ages 26–30. Parental income is defined as the labor income of the primary parental earner, averaged over the years when the child was aged 15–19. The sample is restricted to "permanent residents," defined as parents who lived in the same municipality throughout their income-averaging period. We implement the binned-scatter method of (Cattaneo et al., 2024) with IMSE-optimal bins and 95 percent confidence bands capturing uncertainty in the estimated conditional mean function. The figure also overlays the OLS fit to the individual-level data; the reported standard error for the slope is heteroscedasticity-robust.

Figure A3: Maps of Realized Opportunity Without and With Bayesian Shrinkage

(a) Without Shrinkage



(b) With Shrinkage



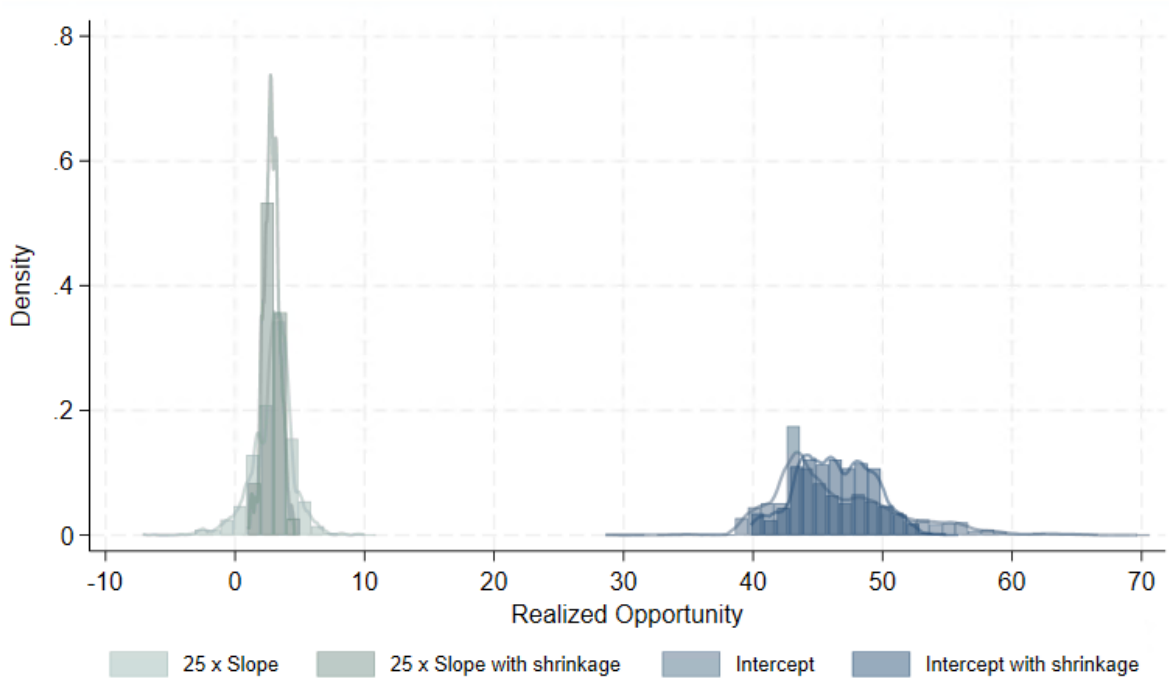
Notes: This figure displays two maps of Denmark's municipalities under the pre-2007 municipal boundaries. Panel (a) shows the predicted national income rank at ages 26–30 for children whose parents were at the 25th percentile of the national income distribution, averaged over 1986–1998 (Realized Opportunity). Panel (b) shows the same measure as Panel (a), but with empirical Bayes shrinkage applied to adjust for estimation noise.

Figure A4: Association Between Realized and Ongoing Opportunity



Notes: This figure displays a binned scatterplot of the relationship between Realized Opportunity and Ongoing Opportunity, along with a fitted linear regression line, estimated in our sample of refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. The regression includes controls for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. The reported standard error for the slope coefficient is clustered at the municipality level. The opportunity measures are standardized to have mean zero and standard deviation 1, and both are estimated with empirical Bayes shrinkage.

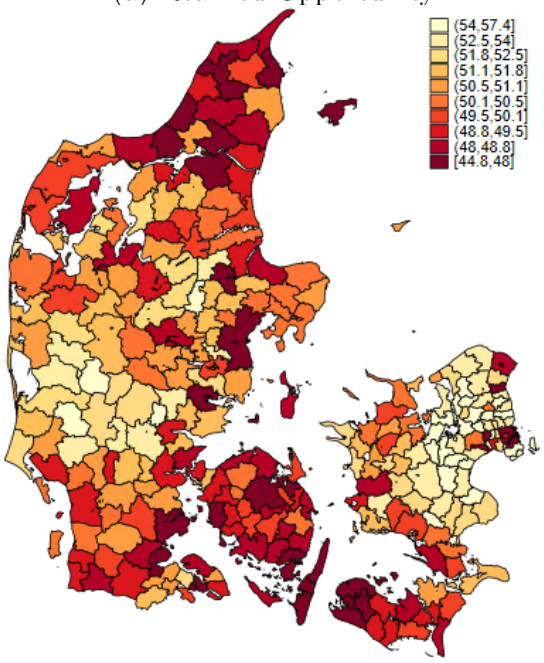
Figure A5: Histograms of the Slope and Intercept from Realized Opportunity



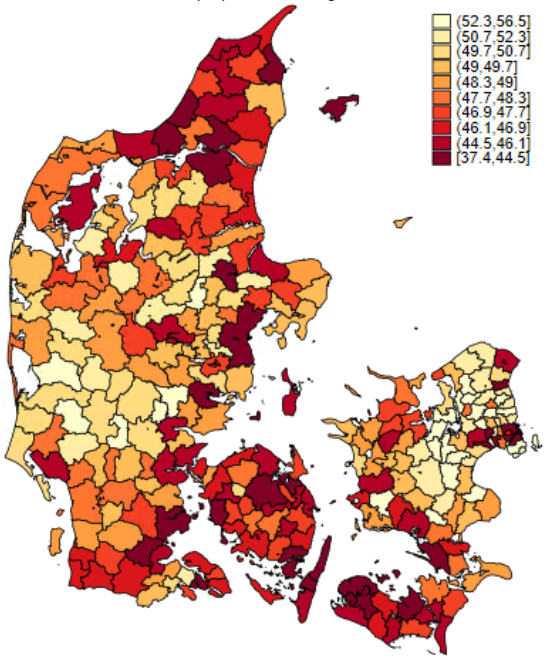
Notes: This figure present histograms with kernel density overlays of the slope and intercept from Realized Opportunity, without and with empirical Bayes shrinkage, in the sample of refugee children whose parents arrived in Denmark during 1986–1998 and were subject to the dispersal policy. The sample is restricted to refugee children who were aged 0–17 at arrival.

Figure A6: Maps of Realized Opportunity Decomposed into Intercept and Slope

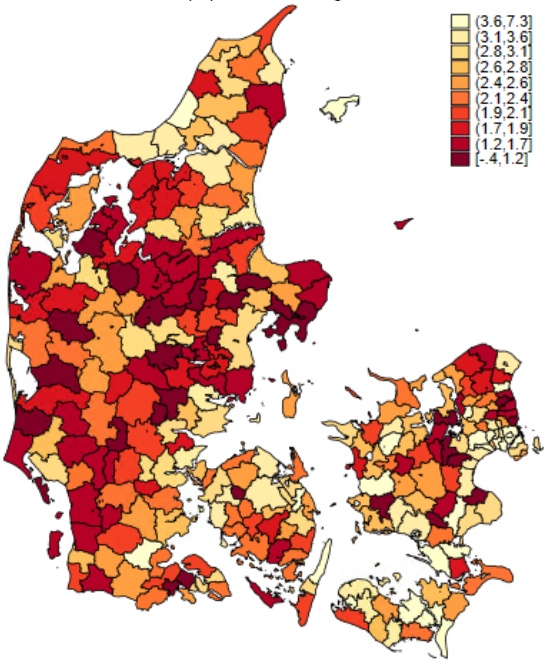
(a) Realized Opportunity



(b) Intercept



(c) 25 × slope



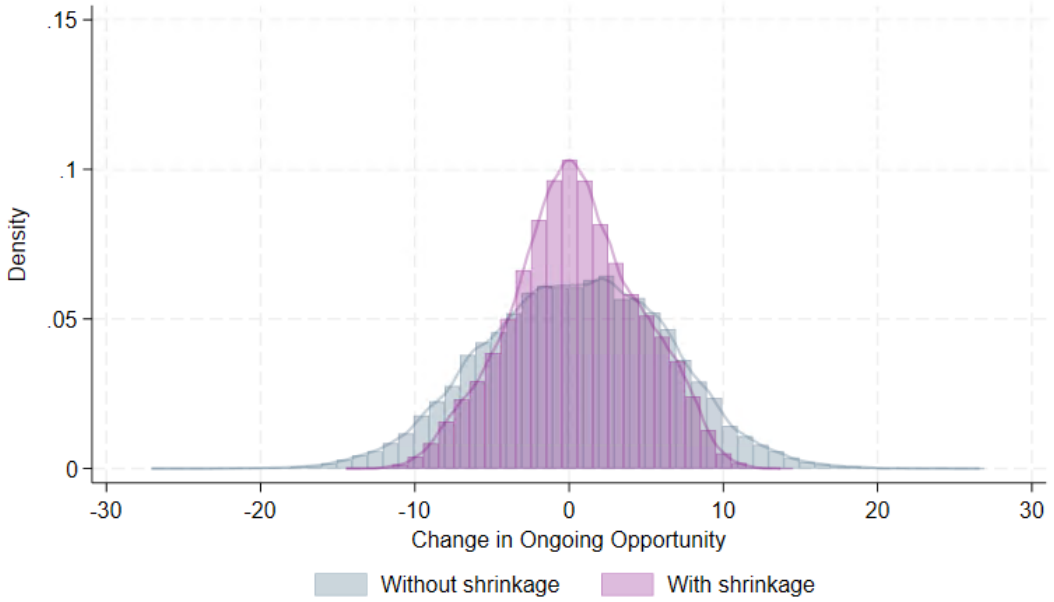
Notes: This figure displays three maps of Denmark's municipalities (pre-2007 municipal boundaries). Panel (a) shows the geographic distribution of Realized Opportunity, averaged over 1986–1998 ($\hat{y}_{25,ms} = \hat{\alpha}_{ms} + 25\,\hat{\psi}_{ms}$). Panel (b) shows, by municipality, the intercept ($\hat{\alpha}_{ms}$), and panel (c) shows 25 times the slope ($25\,\hat{\psi}_{ms}$), both from Realized Opportunity. The unweighted correlation between the slope and intercept is -0.692, and the population-weighted correlation is -0.715. All measures in this figure are estimated without empirical Bayes shrinkage.

Figure A7: Histograms of the Change in Opportunity Measures for Native Movers

(a) Realized Opportunity



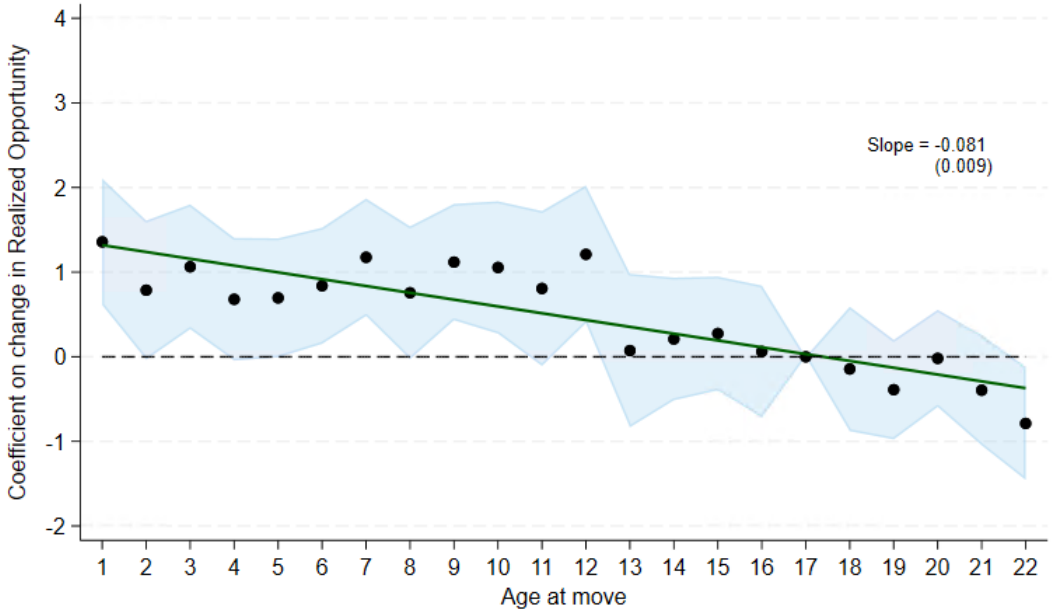
(b) Ongoing Opportunity



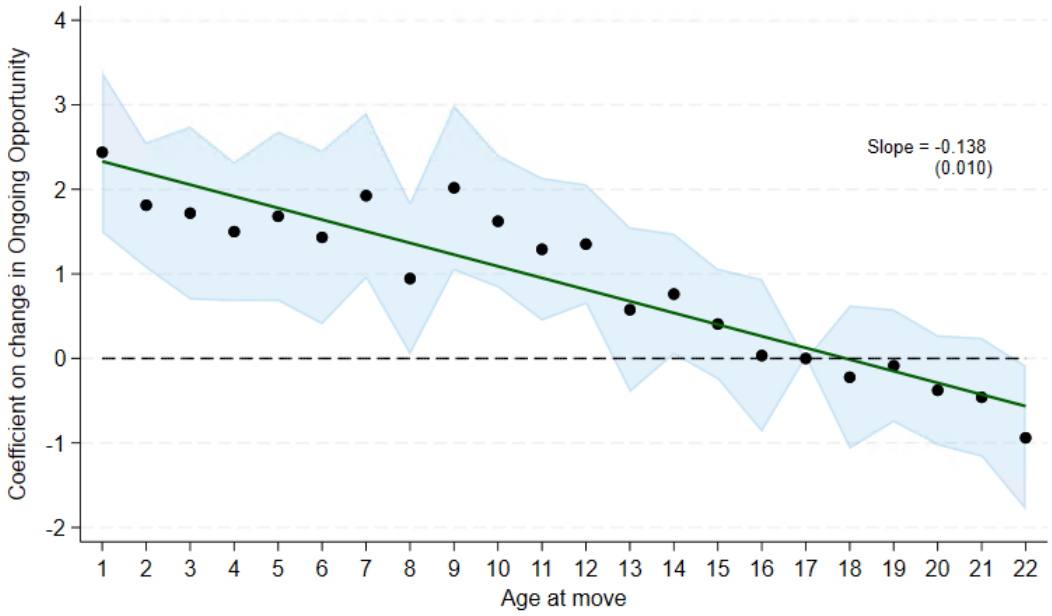
Notes: These figures present histograms with kernel density overlays of Realized and Ongoing Opportunity, shown in panels (a) and (b), respectively, with and without empirical Bayes shrinkage, for the sample of natives (non-refugees) aged 0–22 whose parents moved once from one municipality to another before the child turned 23 during 1986–2014 and for whom we observe income rank at ages 26–30. The unit of observation is the individual child. With shrinkage, the mean (standard deviation) change in Realized Opportunity is 0.26 (3.53), and the mean (standard deviation) change in Ongoing Opportunity is 0.43 (4.12). Without shrinkage, the corresponding mean (standard deviation) values for changes in Realized and Ongoing Opportunity are 0.31 (5.47) and 0.43 (5.94), respectively.

Figure A8: Age-Exposure Effects for Native Movers Without Family Fixed Effects

(a) Realized Opportunity



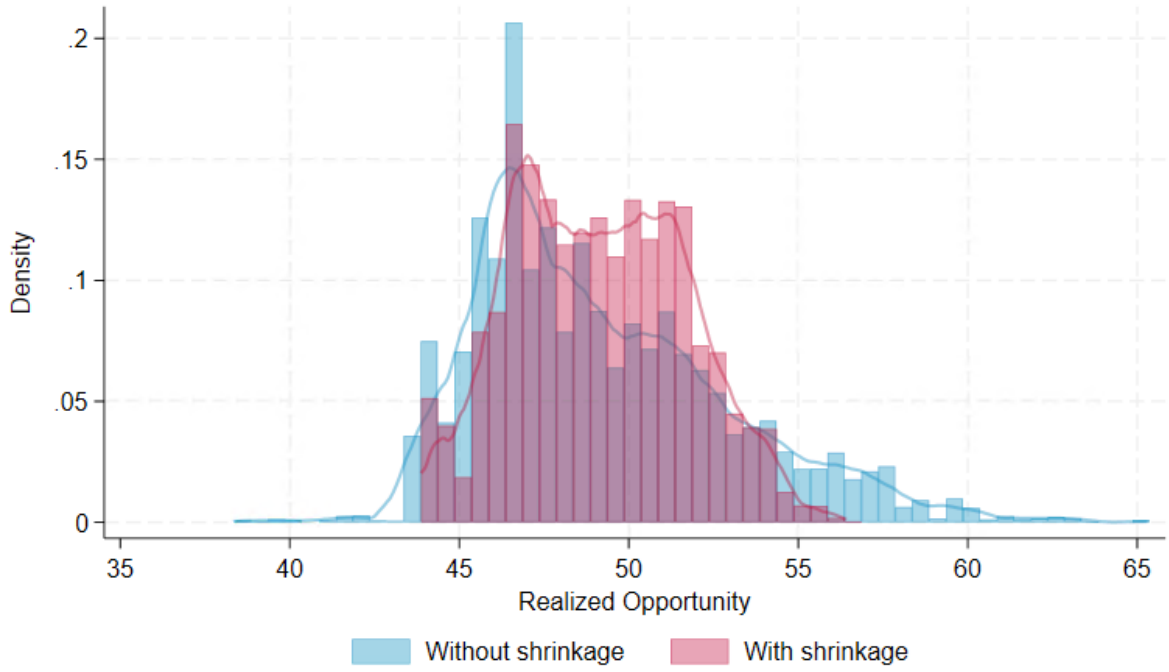
(b) Ongoing Opportunity



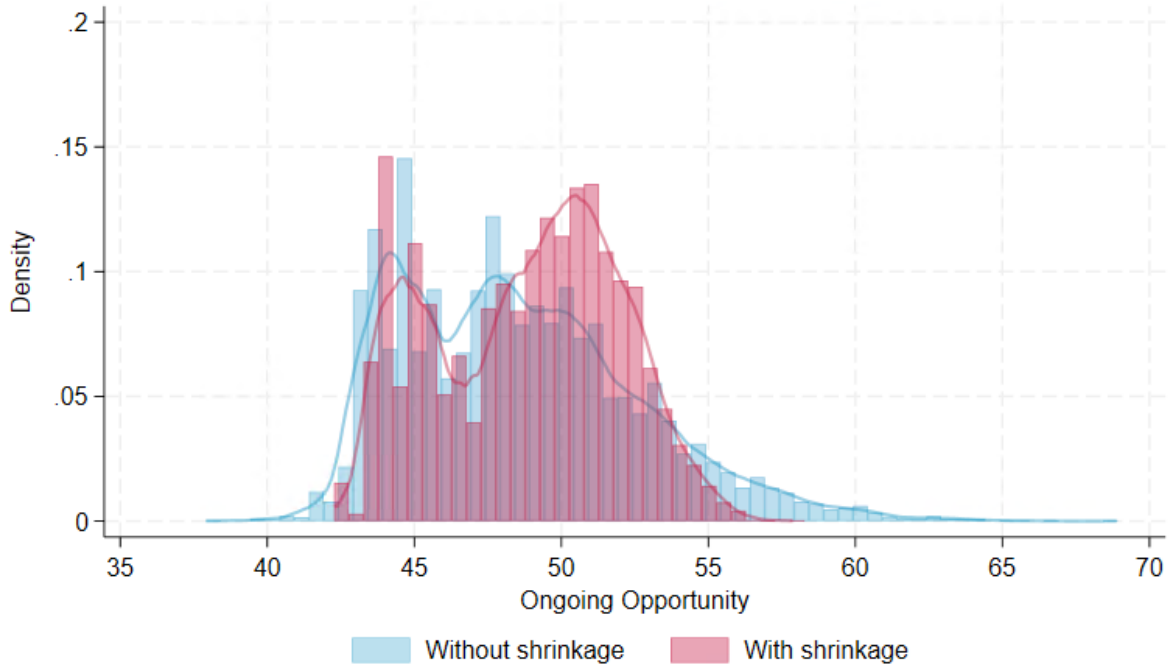
Notes: These figures present age-exposure effects, defined as the coefficients on the interaction between the standardized change in Realized or Ongoing Opportunity and age at move, from regressions of child income rank at ages 26–30 on the change in Realized or Ongoing Opportunity, age at move, and their interaction, controlling for child and parental characteristics measured at the time of the move. The sample includes natives (non-refugees) aged 0–22 whose parents moved once from one municipality to another before the child turned 23 during 1986–2014. Panel (a) reports results using Realized Opportunity and includes year-of-move by origin-municipality fixed effects, while Panel (b) reports results using Ongoing Opportunity and includes birth-cohort by origin-municipality fixed effects. The interaction coefficient at age 17 is normalized to zero. Standard errors in Panel (a) are clustered at the year-of-move by origin-municipality level, and standard errors in Panel (b) are clustered at the birth-cohort by origin-municipality level.

Figure A9: Opportunity Measures Without and With Bayesian Shrinkage

(a) Realized Opportunity

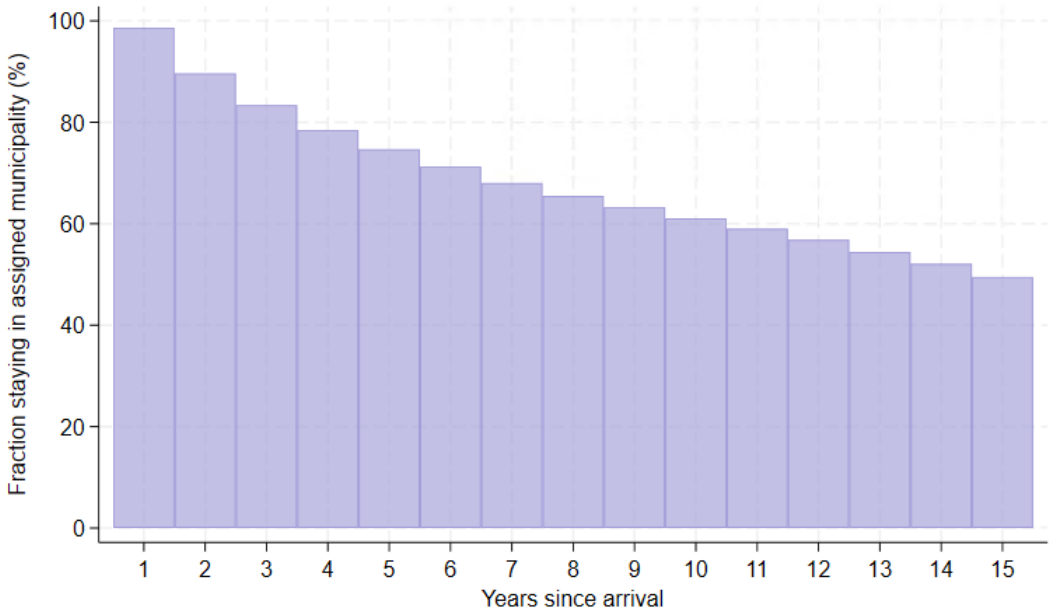


(b) Ongoing Opportunity



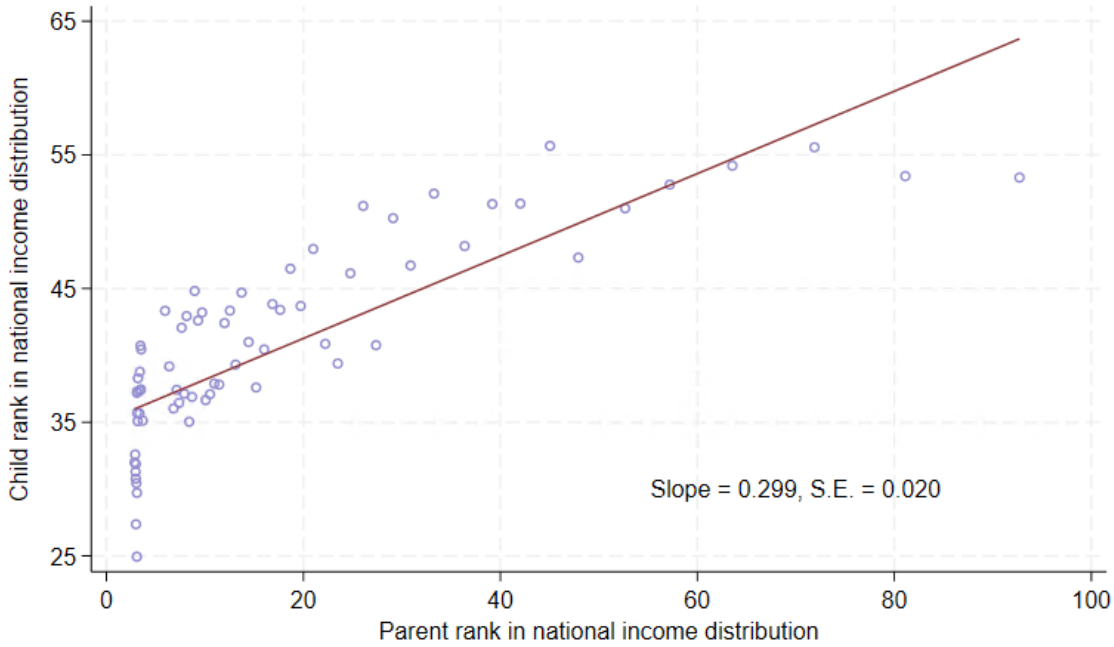
Notes: These figures present histograms with kernel density overlays of Realized and Ongoing Opportunity in panels (a) and (b), respectively, without and with empirical Bayes shrinkage, for the sample of refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. The unit of observation is the individual refugee child. With shrinkage, the mean (standard deviation) of Realized Opportunity is 49.12 (2.55); for Ongoing Opportunity, the mean (standard deviation) is 48.81 (3.13). Without shrinkage, the corresponding mean (standard deviation) values for Realized and Ongoing Opportunity are 49.19 (3.75) and 48.53 (4.03), respectively.

Figure A10: Fraction of refugees living in assigned municipality



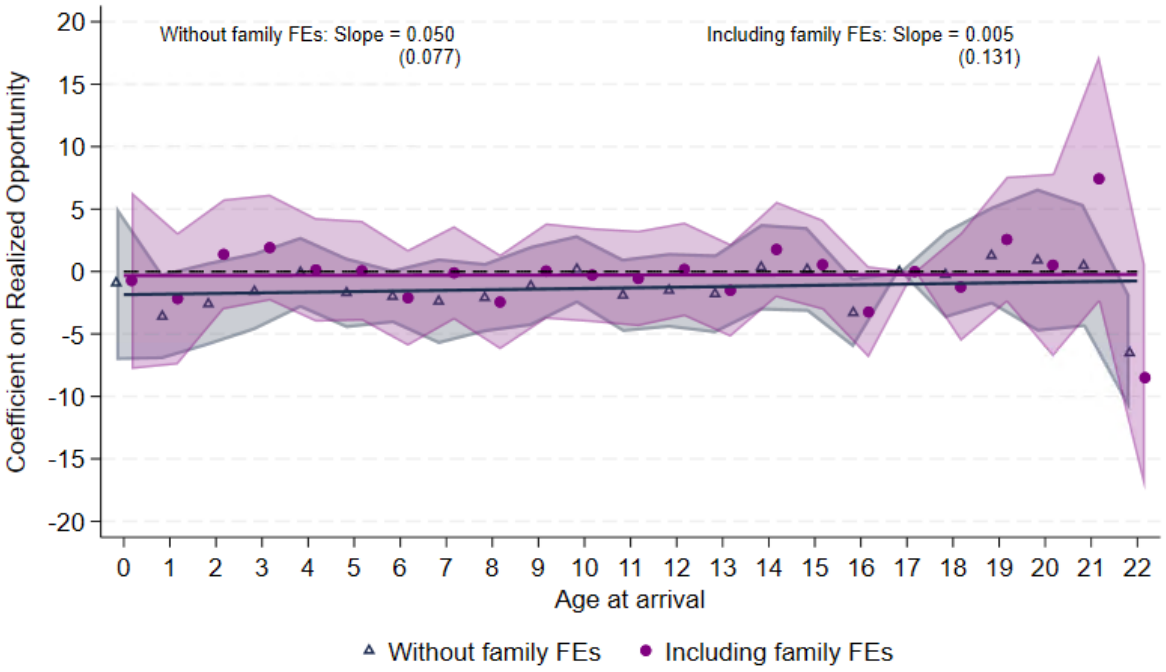
Notes: This figure shows the share of refugee children (aged 0–17 at arrival) who reside in their initial municipality as a function of years since their parents' arrival. The sample comprises 12,432 refugee children who arrived within one year of their parents and were subject to Denmark's 1986–1998 dispersal policy. In this sample, the average length of exposure to the municipality of assignment was 10.23 years.

Figure A11: Mean Child Income Rank versus Parent Income Rank for Refugee Children



Notes: This figure presents a binned scatterplot of the relationship between parental rank and child rank in the national income distribution for refugee children who arrived in Denmark within one year of their parents' arrival between 1986 and 1998, were aged 0–17 at arrival, and were subject to the dispersal policy. Child income is measured as labor income averaged over ages 26–30. Parental income is defined as the labor income of the primary parental earner, averaged over the years when the child was aged 24–28. The figure plots 100 binned means along with a fitted linear regression line. The reported standard error for the slope coefficient is clustered at the household level.

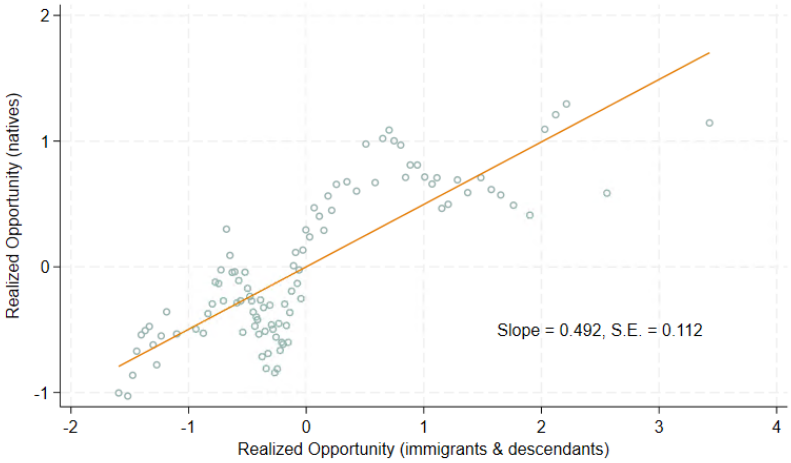
Figure A12: Age-Exposure Effects for Refugees



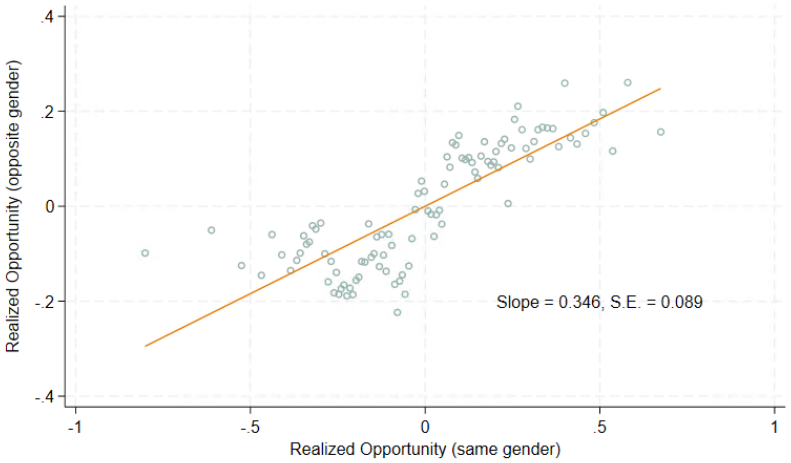
Notes: This figure depicts age-exposure effects for refugee children. Age-exposure effects are defined as the coefficients on the interaction between Realized Opportunity and age at arrival, from regressions of child income rank at ages 26–30 on Realized Opportunity, age at arrival, and their interaction, controlling for child and parental characteristics. Child and parental characteristics are measured at arrival. The sample consists of refugee children who arrived in Denmark at ages 0–22 within one year of their parents' arrival during 1986–1998 and were subject to the dispersal policy. Age 17 is normalized to zero in both panels. Standard errors are clustered at the municipality level in specifications without family fixed effects and at the family level in specifications with family fixed effects.

Figure A13: Associations Between Opportunity Measures

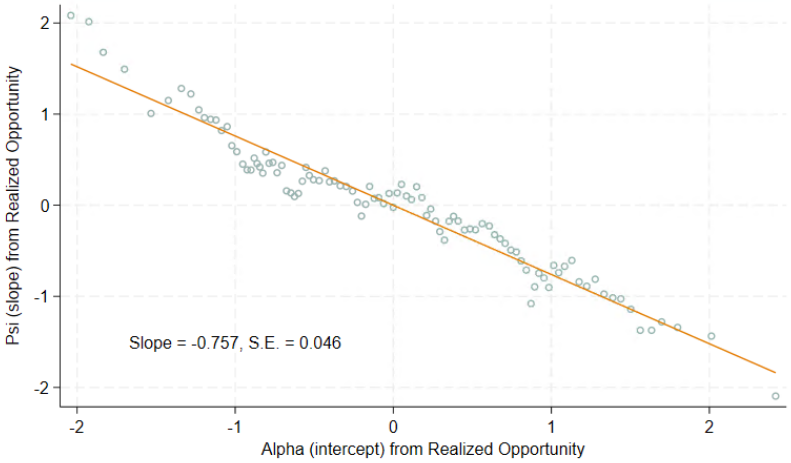
(a) Immigrants and Descendants vs. Natives



(b) Same vs. Opposite Gender



(c) Intercept vs. Slope



Notes: This figure displays three binned scatterplots with fitted linear regression lines, estimated in the sample of refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Panel (a) shows the relationship between Realized Opportunity estimated for immigrants and descendants and Realized Opportunity for natives. Panel (b) shows the relationship between gender-specific Realized Opportunity estimated for each individual's own gender and Realized Opportunity estimated for the opposite gender. Panel (c) shows the relationship between the slope and intercept from the Realized Opportunity measures. The sample in each figure is restricted to refugees dispersed to municipalities in years for which the given Opportunity measures could be estimated using at least 10 observations. The Opportunity measures are standardized and estimated with empirical Bayes shrinkage. All regressions include individual-level controls, as well as year-of-arrival and country-of-origin fixed effects. The reported standard error for the slope coefficient is clustered at the municipality level.

Table A1: Refugees Country of Origin

	(1) N	(2) Mean	(3) S.D.
Lebanon	12,425	0.275	0.447
Iraq	12,425	0.225	0.418
Iran	12,425	0.124	0.329
Somalia	12,425	0.096	0.295
Sri Lanka	12,425	0.089	0.284
Vietnam	12,425	0.085	0.279
Afghanistan	12,425	0.054	0.226
Kuwait	12,425	0.010	0.099
Armenia	12,425	0.007	0.083
Ethiopia	12,425	0.006	0.074
Other	12,425	0.029	0.168

Notes: This table shows the ten most common countries of origin, with the remaining countries grouped into "Other," in our sample of refugee children who arrived in Denmark between 1986 and 1998 at ages 0–17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy.

Table A2: Balance Test of the Quasi-Random Dispersal Policy

Dependent var.:	(1) *log(Pop.)*	(2) % non-western immig.	(3) % co-nationals	(4) % with high-school	(5) Employment rate	(6) Mean earnings	(7) Poverty rate	(8) Gini index	(9) Crime rate	(10) Foster care rate	(11) % teen births	(12) Realized Opportunity
Unobserved at Time of Allocation												
Unknown educ., parent	0.024	0.012	-0.015	-0.035	-0.232	-0.075	0.209	0.065	-0.004	0.003	0.060	-0.144
	(0.059)	(0.072)	(0.010)	(0.286)	(0.203)	(0.170)	(0.219)	(0.129)	(0.035)	(0.007)	(0.041)	(0.123)
Basic educ., parent	-0.006	0.014	0.003	-0.027	-0.115	-0.038	-0.092	0.102	-0.019	0.001	0.016	-0.173
	(0.062)	(0.077)	(0.011)	(0.307)	(0.214)	(0.180)	(0.236)	(0.137)	(0.037)	(0.008)	(0.046)	(0.130)
Academic educ., parent	-0.006	0.057	0.001	0.156	-0.031	0.002	0.009	0.025	-0.036	0.006	0.037	-0.171
	(0.067)	(0.087)	(0.012)	(0.312)	(0.231)	(0.191)	(0.258)	(0.149)	(0.039)	(0.008)	(0.046)	(0.138)
Observed at Time of Allocation												
Age, parent	0.005**	0.004	0.001*	0.017	-0.014*	-0.005	0.010	0.006	0.004**	0.000	0.001	-0.004
	(0.003)	(0.003)	(0.000)	(0.012)	(0.009)	(0.007)	(0.010)	(0.006)	(0.002)	(0.000)	(0.002)	(0.005)
Male, parent	-0.174***	-0.250***	-0.026***	-0.650***	0.317*	-0.050	-0.377**	-0.161*	-0.093***	-0.009*	-0.022	0.054
	(0.044)	(0.054)	(0.008)	(0.215)	(0.162)	(0.134)	(0.185)	(0.098)	(0.026)	(0.005)	(0.035)	(0.093)
Married, parent	0.050	0.053	0.027***	-0.387	-0.504**	-0.324*	0.182	0.237*	0.021	-0.009	0.028	-0.345**
	(0.061)	(0.067)	(0.010)	(0.317)	(0.231)	(0.196)	(0.255)	(0.126)	(0.036)	(0.008)	(0.052)	(0.137)
No. of children, ages 0-2	-0.004	-0.105**	-0.002	-0.145	-0.037	-0.168*	0.083	0.036	-0.030	0.001	-0.017	-0.053
	(0.038)	(0.043)	(0.005)	(0.183)	(0.127)	(0.102)	(0.140)	(0.082)	(0.021)	(0.004)	(0.028)	(0.072)
No. of children, ages 3-17	-0.037**	-0.051***	-0.005**	-0.053	0.078*	0.016	-0.114**	-0.020	-0.016**	-0.003*	-0.016	0.017
	(0.015)	(0.016)	(0.002)	(0.056)	(0.047)	(0.039)	(0.054)	(0.031)	(0.007)	(0.002)	(0.010)	(0.027)
Age, child	0.003	0.001	0.000	0.018	-0.009	-0.003	0.014	0.012*	-0.002	-0.000	0.001	-0.008
	(0.003)	(0.004)	(0.001)	(0.015)	(0.011)	(0.009)	(0.012)	(0.007)	(0.002)	(0.000)	(0.002)	(0.006)
Male, child	-0.032	-0.039	-0.007*	-0.101	0.088	0.037	-0.066	-0.092**	0.003	0.001	-0.004	0.090**
	(0.021)	(0.028)	(0.004)	(0.102)	(0.074)	(0.060)	(0.086)	(0.046)	(0.013)	(0.003)	(0.017)	(0.043)
Observations	12,415	12,415	12,215	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415
R-squared	0.083	0.308	0.297	0.327	0.253	0.122	0.176	0.119	0.126	0.221	0.141	0.132
Households	5555	5555	5468	5555	5555	5555	5555	5555	5555	5555	5555	5555
Unobserved chars.: $Pr > F$	0.916	0.915	0.073	0.881	0.598	0.955	0.425	0.879	0.710	0.864	0.467	0.560
Observed chars.: $Pr > F$	0.00	0.00	0.00	0.003	0.055	0.307	0.108	0.035	0.002	0.192	0.846	0.067
Mean of dep. var	10.90	2.507	0.294	59.10	77.20	28.81	20.93	33.73	2.522	0.370	1.826	49.12

*Notes: This table presents regression estimates of municipality-level characteristics on child and parental attributes for refugee children aged 0-17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. All variables are measured at the time of arrival. Some were unobserved by the Danish Refugee Council when making allocation decisions about how refugees were dispersed across municipalities, while others were observable. $Pr > F$ is the p-value from the F-test of the joint insignificance of the indicated variable set. The educational-attainment dummies are basic education, academic education, and unknown education, with vocational education as the omitted reference category. All regressions control for year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the household level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A3: Tests for Selective Attrition

Dependent var.:	(1) Outmigration within 15 years	(2) Observed child rank	(3) Observed parent rank
Realized Opportunity	0.002	-0.005	-0.006
	(0.006)	(0.005)	(0.006)
Child characteristics			
Age, child	-0.007***	0.027***	0.026***
	(0.001)	(0.001)	(0.002)
Male, child	0.052***	0.043***	0.039***
	(0.006)	(0.005)	(0.007)
Observable parental characteristics			
Age, parent	0.001	-0.002***	-0.003***
	(0.001)	(0.000)	(0.001)
Male, parent	-0.024**	0.003	0.021*
	(0.010)	(0.008)	(0.011)
No. of children, ages 0-2	0.006	-0.032***	-0.025***
	(0.006)	(0.008)	(0.009)
No. of children, ages 3-17	0.013***	0.012***	0.013***
	(0.003)	(0.002)	(0.002)
Married	-0.011	-0.017	0.014
	(0.011)	(0.013)	(0.017)
Unobservable parental characteristics			
Unknown educ.	-0.020	-0.015*	-0.015
	(0.016)	(0.009)	(0.011)
Basic educ.	0.005	-0.008	0.005
	(0.017)	(0.009)	(0.011)
Academic educ.	0.002	0.002	0.022
	(0.017)	(0.010)	(0.013)
Observations	15,316	12,415	12,415
R-squared	0.102	0.214	0.149
Clusters	222	215	215
Mean dep. var	0.811	0.844	0.784

*Notes: This table reports regression estimates of outmigration within 15 years after arrival, an indicator for observing child income rank at ages 26–30, and an indicator for observing parental income rank at ages 24–28 on Realized Opportunity for refugee children who arrived in Denmark between 1986 and 1998 at ages 0–17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. The sample used to estimate effects on the indicators for observing child and parental income ranks is restricted to individuals who did not outmigrate within the first 15 years after arrival, i.e., the main estimation sample. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. All the regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A4: Child income rank regressed on Realized Opportunity and other municipality-level characteristics

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Income rank at 26-30	(6) Income rank at 26-30	(7) Income rank at 26-30	(8) Income rank at 26-30	(9) Income rank at 26-30	(10) Income rank at 26-30	(11) Income rank at 26-30	(12) Income rank at 26-30
Realized Opportunity	1.447***											
	(0.327)											
log(Pop.)		-1.316***										
		(0.387)										
% non-western immig.			0.166									
			(0.502)									
% co-nationals				-0.444								
				(0.381)								
% with high-school					-0.462							
					(0.594)							
Employment rate						1.262***						
						(0.381)						
Mean earnings							1.366***					
							(0.408)					
Poverty rate								-1.659***				
								(0.490)				
Gini index									-1.710***			
									(0.269)			
Crime rate										0.616		
										(0.404)		
Foster care rate											0.021	
											(0.328)	
% teen births												0.438
												(0.422)
Observations	10,474	10,474	10,474	10,304	10,474	10,474	10,474	10,474	10,474	10,474	10,474	10,474
R-squared	0.103	0.103	0.101	0.101	0.101	0.102	0.103	0.104	0.104	0.101	0.101	0.101
Clusters	213	213	213	210	213	213	213	213	213	213	213	213
Mean dep. var	38.79	38.79	38.79	38.77	38.79	38.79	38.79	38.79	38.79	38.79	38.79	38.79

*Notes: This table reports regression estimates of child income rank (averaged over ages 26–30) on municipality-level characteristics - including Realized Opportunity - entered individually, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A5: Horse Race Regressions with Ongoing Opportunity

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Income rank at 26-30	(6) Income rank at 26-30	(7) Income rank at 26-30	(8) Income rank at 26-30	(9) Income rank at 26-30	(10) Income rank at 26-30	(11) Income rank at 26-30	(12) Income rank at 26-30
Ongoing Opportunity	1.821***	2.437***	2.519***	1.779***	2.053***	2.081***	1.537***	1.414***	1.281***	2.008***	1.910***	1.866***
	(0.303)	(0.449)	(0.336)	(0.317)	(0.369)	(0.406)	(0.361)	(0.436)	(0.484)	(0.254)	(0.292)	(0.290)
log(Pop.)		0.734										
		(0.516)										
% non-western immig.			1.622***									
			(0.507)									
% co-nationals				-0.108								
				(0.409)								
% with high-school					0.600							
					(0.436)							
Employment rate						-0.410						
						(0.486)						
Mean earnings							0.653					
							(0.411)					
Poverty rate								-0.627				
								(0.584)				
Gini index									-0.729			
									(0.466)			
Crime rate										1.025***		
										(0.271)		
Foster care rate											0.451	
											(0.336)	
% teen births												0.616
												(0.402)
Observations	10,409	10,409	10,409	10,241	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409
R-squared	0.106	0.106	0.107	0.105	0.106	0.106	0.106	0.106	0.106	0.107	0.106	0.106
Clusters	213	213	213	210	213	213	213	213	213	213	213	213
Mean dep. var	38.83	38.83	38.83	38.81	38.83	38.83	38.83	38.83	38.83	38.83	38.83	38.83

*Notes: This table reports regression estimates of child income rank (averaged over ages 26-30) on Ongoing Opportunity and other municipality-level characteristics for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A6: Child Income Rank Regressed on Ongoing Opportunity and Other Municipality-Level Characteristics

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Income rank at 26-30	(6) Income rank at 26-30	(7) Income rank at 26-30	(8) Income rank at 26-30	(9) Income rank at 26-30	(10) Income rank at 26-30	(11) Income rank at 26-30	(12) Income rank at 26-30
Ongoing Opportunity	1.821***											
	(0.303)											
log(Pop.)		-1.333***										
		(0.384)										
% non-western immig.			0.161									
			(0.509)									
% co-nationals				-0.467								
				(0.378)								
% with high-school					-0.474							
					(0.597)							
Employment rate						1.248***						
						(0.382)						
Mean earnings							1.365***					
							(0.409)					
Poverty rate								-1.667***				
								(0.483)				
Gini index									-1.726***			
									(0.266)			
Crime rate										0.639		
										(0.406)		
Foster care rate											0.007	
											(0.334)	
% teen births												0.473
												(0.428)
Observations	10,409	10,409	10,409	10,241	10,409	10,409	10,409	10,409	10,409	10,409	10,409	10,409
R-squared	0.106	0.104	0.102	0.102	0.102	0.103	0.104	0.105	0.105	0.102	0.102	0.102
Clusters	213	213	213	210	213	213	213	213	213	213	213	213
Mean dep. var	38.83	38.83	38.83	38.81	38.83	38.83	38.83	38.83	38.83	38.83	38.83	38.83

*Notes: This table reports regression estimates of child income rank (averaged over ages 26–30) on municipality-level characteristics - including Ongoing Opportunity - entered individually, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. All explanatory variables are standardized and measured at arrival. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A7: Number of Criminal Convictions Regressed on Realized Opportunity and Other Municipality-Level Characteristics

Dependent var.:	(1) No. criminal convictions	(2) No. criminal convictions	(3) No. criminal convictions	(4) No. criminal convictions	(5) No. criminal convictions	(6) No. criminal convictions	(7) No. criminal convictions	(8) No. criminal convictions	(9) No. criminal convictions	(10) No. criminal convictions	(11) No. criminal convictions	(12) No. criminal convictions
Realized Opportunity	-0.113***											
	(0.042)											
log(Pop.)		0.095*										
		(0.053)										
% non-western immig.			0.066									
			(0.056)									
% co-nationals				0.044								
				(0.045)								
% with high-school					0.084							
					(0.060)							
Employment rate						-0.100*						
						(0.052)						
Mean earnings							-0.023					
							(0.041)					
Poverty rate								0.081*				
								(0.047)				
Gini index									0.068			
									(0.053)			
Crime rate										0.094*		
										(0.050)		
Foster care rate											0.065	
											(0.049)	
% teen births												0.017
												(0.044)
Observations	12,415	12,415	12,415	12,215	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415
R-squared	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
Clusters	215	215	215	212	215	215	215	215	215	215	215	215
Mean dep. var	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637	1.637

*Notes: This table reports regression estimates of criminal convictions (measured up to and including age 30) on municipality-level characteristics - including Realized Opportunity - entered individually, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A8: Parental Income Rank Regressed on Realized Opportunity and Other Municipality-Level Characteristics

Dependent var.:	(1) Parental income rank	(2) Parental income rank	(3) Parental income rank	(4) Parental income rank	(5) Parental income rank	(6) Parental income rank	(7) Parental income rank	(8) Parental income rank	(9) Parental income rank	(10) Parental income rank	(11) Parental income rank	(12) Parental income rank
Realized Opportunity	0.982***											
	(0.317)											
log(Pop.)		-0.294										
		(0.310)										
% non-western immig.			0.035									
			(0.348)									
% co-nationals				-0.397								
				(0.344)								
% with high-school					0.304							
					(0.498)							
Employment rate						0.707**						
						(0.356)						
Mean earnings							0.992***					
							(0.320)					
Poverty rate								-0.746*				
								(0.396)				
Gini index									-0.792***			
									(0.294)			
Crime rate										0.427		
										(0.287)		
Foster care rate											0.408	
											(0.269)	
% teen births												0.434
												(0.326)
Observations	9,735	9,735	9,735	9,574	9,735	9,735	9,735	9,735	9,735	9,735	9,735	9,735
R-squared	0.184	0.182	0.181	0.182	0.182	0.182	0.184	0.183	0.183	0.182	0.182	0.182
Clusters	212	212	212	210	212	212	212	212	212	212	212	212
Mean dep. var	13.45	13.45	13.45	13.39	13.45	13.45	13.45	13.45	13.45	13.45	13.45	13.45

*Notes: This table reports regression estimates of parental income rank, measured using the labor income of the primary parental earner and averaged when the child is aged 24-28, on municipality-level characteristics - including Realized Opportunity - entered individually, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. All explanatory variables are standardized and measured at arrival. The regressions also control for child and parental characteristics, as well as year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A9: Regressions With and Without Shrinkage

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Parental income rank	(4) Parental income rank	(5) No. criminal convictions	(6) No. criminal convictions	(7) Income rank at 26-30	(8) Income rank at 26-30
Realized Opportunity with shrinkage	1.463***		0.989***		-0.113***			
	(0.331)		(0.320)		(0.042)			
Realized Opportunity without shrinkage		1.414***		1.155***		-0.101**		
		(0.331)		(0.318)		(0.044)		
Ongoing Opportunity with shrinkage							1.821***	
							(0.303)	
Ongoing Opportunity without shrinkage								1.924***
								(0.307)
Child characteristics								
Age, child	-1.141***	-1.142***	-0.166***	-0.167***	-0.041***	-0.041***	-1.185***	-1.191***
	(0.072)	(0.072)	(0.046)	(0.046)	(0.012)	(0.012)	(0.074)	(0.074)
Male, child	7.041***	7.050***	-0.080	-0.078	2.448***	2.448***	7.116***	7.116***
	(0.588)	(0.588)	(0.315)	(0.315)	(0.103)	(0.103)	(0.590)	(0.591)
Parental characteristics observed by DRC								
Age, parent	0.008	0.008	-0.474***	-0.474***	0.002	0.002	0.012	0.012
	(0.044)	(0.044)	(0.026)	(0.026)	(0.007)	(0.007)	(0.045)	(0.045)
Male, parent	0.878	0.891	3.552***	3.558***	-0.281***	-0.282***	0.798	0.809
	(0.936)	(0.941)	(0.588)	(0.588)	(0.105)	(0.105)	(0.943)	(0.941)
No. of children, ages 0-2	-2.380***	-2.393***	-2.280***	-2.288***	0.202***	0.204***	-2.442***	-2.456***
	(0.523)	(0.522)	(0.344)	(0.346)	(0.074)	(0.074)	(0.535)	(0.534)
No. of children, ages 3-17	-1.085***	-1.089***	-1.240***	-1.244***	0.117***	0.117***	-1.141***	-1.146***
	(0.169)	(0.170)	(0.173)	(0.173)	(0.035)	(0.035)	(0.164)	(0.165)
Married	0.021	0.070	0.607	0.675	-0.060	-0.062	0.071	0.083
	(0.914)	(0.913)	(0.767)	(0.767)	(0.114)	(0.113)	(0.910)	(0.907)
Parental characteristics unobserved by DRC								
Unknown educ.	0.530	0.508	0.160	0.152	-0.292*	-0.290*	0.547	0.529
	(0.909)	(0.909)	(0.615)	(0.614)	(0.155)	(0.153)	(0.929)	(0.926)
Basic educ.	0.661	0.659	-0.910	-0.903	-0.304*	-0.303**	0.596	0.574
	(1.024)	(1.032)	(0.709)	(0.708)	(0.154)	(0.153)	(1.040)	(1.044)
Academic educ.	3.373***	3.328***	3.210***	3.190***	-0.237	-0.233	3.195**	3.148**
	(1.291)	(1.297)	(0.885)	(0.879)	(0.146)	(0.145)	(1.333)	(1.334)
Observations	10,474	10,474	9,735	9,735	12,415	12,415	10,409	10,409
R-squared	0.103	0.103	0.184	0.185	0.135	0.135	0.106	0.106
Clusters	213	213	212	212	215	215	213	213
Mean dep. var	38.79	38.79	13.45	13.45	1.637	1.637	38.83	38.83

*Notes: This table reports regression estimates of child income rank at ages 26–30 on Realized Opportunity in the municipality of assignment for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Realized Opportunity is measured with and without empirical Bayes shrinkage. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Each column presents a different specification. All regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A10: Regressions with Realized Opportunity Measured at Different Points in Time

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Income rank at 26-30	(5) Parental income rank	(6) Parental income rank	(7) Parental income rank	(8) Parental income rank	(9) No. criminal convictions	(10) No. criminal convictions	(11) No. criminal convictions	(12) No. criminal convictions
Realized Opportunity (T)	1.482***			1.253**	1.158***			1.651***	-0.106**			-0.113
	(0.333)			(0.537)	(0.343)			(0.551)	(0.043)			(0.077)
Realized Opportunity (T+1)		1.216***		0.019		0.761**		-0.245		-0.077*		0.026
		(0.375)		(0.650)		(0.336)		(0.523)		(0.040)		(0.078)
Realized Opportunity (T-1)			1.288***	0.286			0.716**	-0.395			-0.087**	-0.019
			(0.371)	(0.529)			(0.321)	(0.471)			(0.039)	(0.076)
Child characteristics												
Age, child	-1.138***	-1.137***	-1.138***	-1.137***	-0.126**	-0.126**	-0.126**	-0.127**	-0.041***	-0.041***	-0.041***	-0.041***
	(0.070)	(0.070)	(0.070)	(0.070)	(0.050)	(0.049)	(0.049)	(0.050)	(0.013)	(0.013)	(0.013)	(0.013)
Male, child	6.695***	6.719***	6.703***	6.693***	-0.134	-0.114	-0.118	-0.135	2.487***	2.486***	2.487***	2.487***
	(0.622)	(0.628)	(0.622)	(0.622)	(0.419)	(0.420)	(0.416)	(0.420)	(0.107)	(0.108)	(0.107)	(0.107)
Parental characteristics observed by DRC												
Age, parent	0.011	0.010	0.013	0.011	-0.535***	-0.536***	-0.535***	-0.535***	0.004	0.004	0.004	0.004
	(0.048)	(0.048)	(0.048)	(0.048)	(0.030)	(0.031)	(0.030)	(0.030)	(0.007)	(0.007)	(0.007)	(0.007)
Male, parent	1.089	1.086	1.043	1.074	4.093***	4.099***	4.082***	4.116***	-0.319***	-0.319***	-0.316***	-0.318***
	(0.945)	(0.948)	(0.946)	(0.946)	(0.672)	(0.667)	(0.658)	(0.668)	(0.115)	(0.115)	(0.115)	(0.115)
No. of children, ages 0-2	-2.178***	-2.156***	-2.163***	-2.174***	-2.383***	-2.374***	-2.381***	-2.388***	0.199**	0.198**	0.198**	0.199**
	(0.574)	(0.571)	(0.575)	(0.577)	(0.375)	(0.374)	(0.376)	(0.374)	(0.093)	(0.093)	(0.093)	(0.093)
No. of children, ages 3-17	-1.051***	-1.046***	-1.054***	-1.052***	-1.283***	-1.279***	-1.285***	-1.283***	0.112***	0.112***	0.113***	0.112***
	(0.184)	(0.186)	(0.188)	(0.184)	(0.195)	(0.195)	(0.193)	(0.194)	(0.040)	(0.040)	(0.041)	(0.040)
Married	0.621	0.588	0.580	0.626	0.572	0.523	0.510	0.562	-0.044	-0.039	-0.039	-0.044
	(0.938)	(0.942)	(0.941)	(0.939)	(0.858)	(0.876)	(0.885)	(0.857)	(0.140)	(0.141)	(0.140)	(0.140)
Parental characteristics unobserved by DRC												
Unknown educ.	-0.258	-0.289	-0.302	-0.263	-0.079	-0.106	-0.121	-0.069	-0.280*	-0.277*	-0.275	-0.279*
	(1.031)	(1.034)	(1.029)	(1.030)	(0.709)	(0.722)	(0.723)	(0.707)	(0.169)	(0.167)	(0.167)	(0.169)
Basic educ.	-0.195	-0.201	-0.233	-0.198	-1.272	-1.286	-1.312	-1.268	-0.276*	-0.274*	-0.272*	-0.276*
	(1.030)	(1.032)	(1.042)	(1.030)	(0.805)	(0.817)	(0.817)	(0.802)	(0.148)	(0.146)	(0.146)	(0.148)
Academic educ.	3.069**	3.019**	3.005**	3.061**	3.637***	3.595***	3.581***	3.655***	-0.196	-0.192	-0.192	-0.196
	(1.273)	(1.268)	(1.275)	(1.276)	(0.973)	(0.979)	(0.965)	(0.971)	(0.138)	(0.137)	(0.136)	(0.138)
Observations	9,162	9,162	9,162	9,162	8,541	8,541	8,541	8,541	10,892	10,892	10,892	10,892
R-squared	0.105	0.104	0.104	0.105	0.188	0.186	0.186	0.188	0.136	0.136	0.136	0.136
Clusters	208	208	208	208	207	207	207	207	210	210	210	210
Mean dep. var	38.91	38.91	38.91	38.91	11.55	11.55	11.55	11.55	1.650	1.650	1.650	1.650

*Notes: This table reports regression estimates of child income rank at ages 26–30 on Realized Opportunity, measured at different times in the municipality of assignment, for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Year T denotes the year of arrival; T+1 denotes one year after arrival; and T–1 denotes the year prior to arrival. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Each column presents a different specification. All the regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A11: Regressions with Realized Opportunity in Pre- and Post-2007 Reform Municipalities

Dependent var.:	(1) Income rank at 26-30	(2) Income rank at 26-30	(3) Income rank at 26-30	(4) Parental income rank	(5) Parental income rank	(6) Parental income rank	(7) No. criminal convictions	(8) No. criminal convictions	(9) No. criminal convictions
Realized Opportunity, pre-2007 mun.	1.463***		0.142	1.084***		1.949**	-0.113***		-0.080
	(0.331)		(0.792)	(0.337)		(0.776)	(0.042)		(0.110)
Realized Opportunity, post-2007 mun.		1.588***	1.455*		0.876***	-0.951		-0.111***	-0.036
		(0.345)	(0.823)		(0.337)	(0.765)		(0.043)	(0.111)
Child characteristics									
Age, child	-1.142***	-1.141***	-1.141***	-0.133***	-0.133***	-0.133***	-0.041***	-0.041***	-0.041***
	(0.072)	(0.071)	(0.072)	(0.049)	(0.049)	(0.049)	(0.012)	(0.012)	(0.012)
Male, child	7.040***	7.048***	7.047***	-0.076	-0.066	-0.078	2.448***	2.448***	2.448***
	(0.587)	(0.588)	(0.588)	(0.332)	(0.331)	(0.332)	(0.103)	(0.103)	(0.103)
Parental characteristics observed by DRC									
Age, parent	0.008	0.008	0.008	-0.541***	-0.542***	-0.540***	0.002	0.002	0.002
	(0.044)	(0.044)	(0.044)	(0.028)	(0.028)	(0.028)	(0.007)	(0.007)	(0.007)
Male, parent	0.874	0.857	0.858	3.889***	3.883***	3.901***	-0.281***	-0.280***	-0.280***
	(0.937)	(0.935)	(0.935)	(0.617)	(0.617)	(0.614)	(0.105)	(0.105)	(0.105)
No. of children, ages 0-2	-2.384***	-2.386***	-2.385***	-2.525***	-2.530***	-2.525***	0.202***	0.202***	0.202***
	(0.522)	(0.524)	(0.524)	(0.363)	(0.365)	(0.361)	(0.074)	(0.074)	(0.074)
No. of children, ages 3-17	-1.086***	-1.083***	-1.083***	-1.357***	-1.354***	-1.359***	0.117***	0.117***	0.117***
	(0.169)	(0.167)	(0.168)	(0.187)	(0.187)	(0.187)	(0.035)	(0.035)	(0.035)
Married	0.019	0.041	0.041	0.734	0.718	0.719	-0.061	-0.061	-0.061
	(0.914)	(0.917)	(0.917)	(0.795)	(0.801)	(0.799)	(0.114)	(0.113)	(0.113)
Parental characteristics unobserved by DRC									
Unknown educ.	0.531	0.500	0.503	0.107	0.077	0.124	-0.292*	-0.289*	-0.291*
	(0.910)	(0.911)	(0.913)	(0.657)	(0.663)	(0.657)	(0.155)	(0.154)	(0.155)
Basic educ.	0.655	0.633	0.636	-1.031	-1.056	-1.019	-0.304*	-0.302*	-0.304*
	(1.024)	(1.024)	(1.026)	(0.750)	(0.753)	(0.750)	(0.154)	(0.154)	(0.155)
Academic educ.	3.372***	3.317**	3.323**	3.386***	3.336***	3.423***	-0.237	-0.232	-0.236
	(1.291)	(1.295)	(1.298)	(0.909)	(0.907)	(0.902)	(0.146)	(0.145)	(0.145)
Observations	10,474	10,474	10,474	9,735	9,735	9,735	12,415	12,415	12,415
R-squared	0.103	0.104	0.104	0.196	0.195	0.196	0.135	0.135	0.135
Clusters	213	213	213	212	212	212	215	215	215
Mean dep. var	38.79	38.79	38.79	11.74	11.74	11.74	1.637	1.637	1.637

*Notes: This table reports regression estimates for child income rank at ages 26–30, parental income rank at ages 24–28, and the number of criminal convictions up to and including age 30, on Realized Opportunity measures estimated separately for pre- and post-2007 reform municipalities. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. The sample consists of refugee children who arrived in Denmark at ages 0–17 within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Each column presents a different specification. All the regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the post-2007 municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A12: Results Dropping Five Biggest Cities

	Five biggest cities dropped			Full sample		
Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Income rank at 26-30	(5) Parental income rank	(6) No. criminal convictions
Realized Opportunity	1.265***	1.351***	-0.149**	1.463***	0.989***	-0.113***
	(0.463)	(0.444)	(0.073)	(0.331)	(0.320)	(0.042)
Child characteristics						
Age, child	-1.065***	-0.162**	-0.037***	-1.141***	-0.166***	-0.041***
	(0.094)	(0.063)	(0.014)	(0.072)	(0.046)	(0.012)
Male, child	6.946***	-0.232	2.290***	7.041***	-0.080	2.448***
	(0.785)	(0.461)	(0.125)	(0.588)	(0.315)	(0.103)
Parental characteristics observed by DRC						
Age, parent	0.021	-0.500***	0.004	0.008	-0.474***	0.002
	(0.063)	(0.036)	(0.009)	(0.044)	(0.026)	(0.007)
Male, parent	-0.656	4.465***	-0.282**	0.878	3.552***	-0.281***
	(1.105)	(0.792)	(0.125)	(0.936)	(0.588)	(0.105)
No. of children, ages 0-2	-2.580***	-2.904***	0.204**	-2.380***	-2.280***	0.202***
	(0.773)	(0.508)	(0.098)	(0.523)	(0.344)	(0.074)
No. of children, ages 3-17	-1.108***	-1.567***	0.063*	-1.085***	-1.240***	0.117***
	(0.234)	(0.185)	(0.036)	(0.169)	(0.173)	(0.035)
Married	-0.112	-0.100	-0.017	0.021	0.607	-0.060
	(1.349)	(1.073)	(0.142)	(0.914)	(0.767)	(0.114)
Parental characteristics unobserved by DRC						
Unknown educ.	1.296	-0.070	-0.382*	0.530	0.160	-0.292*
	(1.262)	(0.887)	(0.169)	(0.909)	(0.615)	(0.155)
Basic educ.	1.974*	-0.545	-0.336*	0.661	-0.910	-0.304*
	(1.164)	(0.915)	(0.172)	(1.024)	(0.709)	(0.154)
Academic educ.	4.324***	3.114***	-0.284*	3.373***	3.210***	-0.237
	(1.379)	(1.110)	(0.169)	(1.291)	(0.885)	(0.146)
Observations	6,753	6,259	8,017	10,474	9,735	12,415
R-squared	0.089	0.191	0.133	0.103	0.184	0.135
Clusters	208	207	210	213	212	215
Mean dep. var	40.28	14.41	1.545	38.79	13.45	1.637

*Notes: This table reports regression estimates of child income rank at ages 26–30, parental income rank at ages 24–28, and the number of criminal convictions up to and including age 30 on Realized Opportunity for refugee children who arrived in Denmark at ages 0–17 within one year of their parents' arrival during 1986–1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. The sample in columns (1)–(3) includes only refugee children dispersed to municipalities outside the five largest Danish cities (Copenhagen, Aarhus, Odense, Aalborg, and Esbjerg), whereas columns (4)–(6) use the full sample for comparison. Column-specific sample sizes for the full sample reflect outcome-specific register availability and the age at which the outcome is measured. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. All regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table A13: Results with Conventional Cluster Bootstrapped Standard Errors

	Clustered bootstrap SE			Conventional cluster SE		
Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Income rank at 26-30	(5) Parental income rank	(6) No. criminal convictions
Realized Opportunity	1.463***	0.989***	-0.113***	1.463***	0.989***	-0.113***
	(0.247)	(0.279)	(0.033)	(0.331)	(0.320)	(0.042)
Child characteristics						
Age, child	-1.141***	-0.166***	-0.041***	-1.141***	-0.166***	-0.041***
	(0.059)	(0.040)	(0.010)	(0.072)	(0.046)	(0.012)
Male, child	7.041***	-0.080	2.448***	7.041***	-0.080	2.448***
	(0.530)	(0.257)	(0.074)	(0.588)	(0.315)	(0.103)
Parental characteristics observed by DRC						
Age, parent	0.008	-0.474***	0.002	0.008	-0.474***	0.002
	(0.041)	(0.022)	(0.005)	(0.044)	(0.026)	(0.007)
Male, parent	0.878	3.552***	-0.281***	0.878	3.552***	-0.281***
	(0.750)	(0.500)	(0.074)	(0.936)	(0.588)	(0.105)
No. of children, ages 0-2	-2.380***	-2.280***	0.202***	-2.380***	-2.280***	0.202***
	(0.455)	(0.294)	(0.055)	(0.523)	(0.344)	(0.074)
No. of children, ages 3-17	-1.085***	-1.240***	0.117***	-1.085***	-1.240***	0.117***
	(0.126)	(0.125)	(0.022)	(0.169)	(0.173)	(0.035)
Married	0.021	0.607	-0.060	0.021	0.607	-0.060
	(0.791)	(0.708)	(0.083)	(0.914)	(0.767)	(0.114)
Parental characteristics unobserved by DRC						
Unknown educ.	0.530	0.160	-0.292**	0.530	0.160	-0.292*
	(0.724)	(0.527)	(0.126)	(0.909)	(0.615)	(0.155)
Basic educ.	0.661	-0.910	-0.304***	0.661	-0.910	-0.304*
	(0.800)	(0.608)	(0.113)	(1.024)	(0.709)	(0.154)
Academic educ.	3.373***	3.210***	-0.237**	3.373***	3.210***	-0.237
	(0.966)	(0.724)	(0.118)	(1.291)	(0.885)	(0.146)
Observations	10,475	9,737	12,415	10,474	9,735	12,415
R-squared	0.103	0.184	0.135	0.103	0.184	0.135
Clusters	213	212	215	213	212	215
Mean dep. var	38.80	13.45	1.637	38.79	13.45	1.637

*Notes: This table reports regression estimates of child income rank at ages 26–30, parental income rank at ages 24–28, and the number of criminal convictions up to and including age 30 on Realized Opportunity for refugee children who arrived in Denmark between 1986 and 1998 at ages 0–17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. All the regressions include year-of-arrival and country-of-origin fixed effects. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Bootstrapped standard errors, computed using 9,999 replications and clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

B Appendix Tables

Table B1: Results on Education and Labor Market Outcomes

Dependent var.:	(1) Years of schooling	(2) Pr(Compulsory school)	(3) Pr(High school)	(4) Pr(Vocational degree)	(5) Pr(Academic degree)	(6) Pr(Employed at 26)	(7) Earnings at 26-30	(8) Pr(Married at 30)
Realized Opportunity	0.071	-0.012	0.001	0.011*	0.002	0.020***	0.863***	0.008
	(0.049)	(0.007)	(0.004)	(0.006)	(0.007)	(0.005)	(0.196)	(0.006)
Parental characteristics observed by DRC								
Age, parent	0.006	-0.001*	-0.000	0.001	0.000	-0.001*	0.012	-0.000
	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.028)	(0.001)
Male, parent	0.042	-0.007	0.010	-0.004	0.003	0.016	0.501	0.001
	(0.086)	(0.017)	(0.007)	(0.014)	(0.007)	(0.011)	(0.599)	(0.013)
No. of children, ages 0-2	-0.241***	0.036***	-0.009*	-0.012	-0.017***	-0.037***	-1.543***	0.013
	(0.056)	(0.011)	(0.005)	(0.011)	(0.006)	(0.009)	(0.349)	(0.008)
No. of children, ages 3-17	-0.166***	0.022***	-0.004**	-0.001	-0.017***	-0.014***	-0.727***	-0.001
	(0.021)	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.110)	(0.002)
Married	0.185	-0.033*	-0.009	0.030*	0.014	0.030**	-0.054	0.001
	(0.118)	(0.020)	(0.013)	(0.015)	(0.014)	(0.015)	(0.610)	(0.015)
Child characteristics								
Age, child	-0.161***	0.022***	-0.001	-0.011***	-0.013***	-0.005***	-0.542***	0.019***
	(0.007)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.047)	(0.001)
Male, child	-0.604***	0.103***	0.004	-0.063***	-0.044***	0.079***	4.697***	-0.157***
	(0.046)	(0.010)	(0.006)	(0.012)	(0.007)	(0.011)	(0.375)	(0.008)
Parental characteristics unobserved by DRC								
Unknown educ.	-0.011	0.016	-0.009	-0.023	0.021*	-0.006	0.322	-0.018
	(0.085)	(0.015)	(0.009)	(0.019)	(0.012)	(0.012)	(0.605)	(0.014)
Basic educ.	0.053	-0.004	-0.002	0.005	0.006	-0.003	0.297	-0.040***
	(0.113)	(0.017)	(0.010)	(0.019)	(0.013)	(0.016)	(0.675)	(0.015)
Academic educ.	0.338***	-0.027	0.001	-0.033*	0.063***	0.020	2.394***	-0.012
	(0.129)	(0.019)	(0.012)	(0.019)	(0.014)	(0.018)	(0.817)	(0.018)
Observations	10,454	10,565	10,565	10,565	10,565	10,467	10,474	11,009
R-squared	0.172	0.124	0.021	0.028	0.092	0.064	0.082	0.109
Clusters	212	212	212	212	212	213	213	212
Mean dep. var	12.32	0.393	0.104	0.353	0.139	0.691	19.65	0.316

*Notes: This table presents regression estimates of child outcomes - education, employment, and income - on Realized Opportunity in the municipality of assignment for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Education is measured at age 30; employment is defined as having positive labor income at age 26; earnings at ages 26–30 are calculated as average labor income over those years and are measured in thousands of USD; and marriage is measured as whether the individual is married at age 30. All regressions control for year-of-arrival and country-of-origin fixed effects in addition to the parental and child characteristics from the balancing tests. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B2: Results on Crime, Foster Care and Teen Motherhood Outcomes

	P(crime)				Number of crimes					
Dependent var.:	(1) All crime	(2) Property crime	(3) Violent crime	(4) Other crime	(5) All crime	(6) Property crime	(7) Violent crime	(8) Other crime	(9) Pr(Foster care)	(10) Pr(Teen motherhood)
Realized Opportunity	-0.005	-0.007	-0.007	0.001	-0.113***	-0.058***	-0.014	-0.041	-0.007*	-0.005*
	(0.007)	(0.006)	(0.004)	(0.003)	(0.042)	(0.020)	(0.010)	(0.025)	(0.004)	(0.003)
Parental characteristics observed by DRC										
Age, parent	-0.001**	-0.001**	0.000	-0.000	0.002	-0.003	0.002	0.002	-0.000	-0.000
	(0.001)	(0.001)	(0.000)	(0.000)	(0.007)	(0.003)	(0.001)	(0.004)	(0.000)	(0.000)
Male, parent	-0.013	-0.017*	-0.010	-0.001	-0.281***	-0.087**	-0.028	-0.165**	-0.022***	-0.008
	(0.011)	(0.009)	(0.007)	(0.005)	(0.105)	(0.039)	(0.019)	(0.070)	(0.007)	(0.006)
No. of children, ages 0-2	0.027***	0.027***	0.013**	0.002	0.202***	0.111***	0.047***	0.044	0.009	0.018***
	(0.008)	(0.007)	(0.006)	(0.003)	(0.074)	(0.040)	(0.017)	(0.032)	(0.006)	(0.005)
No. of children, ages 3-17	0.014***	0.013***	0.011***	-0.001	0.117***	0.056***	0.030***	0.030	0.004**	0.007***
	(0.003)	(0.002)	(0.002)	(0.001)	(0.035)	(0.012)	(0.008)	(0.019)	(0.002)	(0.002)
Married	-0.023	-0.023*	-0.007	0.004	-0.060	-0.024	-0.018	-0.018	-0.022**	-0.005
	(0.014)	(0.013)	(0.011)	(0.007)	(0.114)	(0.059)	(0.024)	(0.053)	(0.010)	(0.012)
Child characteristics										
Age, child	0.001	0.004***	-0.002**	-0.002***	-0.041***	0.009***	-0.005*	-0.046***	-0.001*	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.012)	(0.005)	(0.003)	(0.006)	(0.001)	(0.001)
Male, child	0.383***	0.246***	0.209***	0.079***	2.448***	0.849***	0.419***	1.181***	0.036***	
	(0.011)	(0.009)	(0.009)	(0.005)	(0.103)	(0.051)	(0.022)	(0.058)	(0.005)	
Parental characteristics unobserved by DRC										
Unknown educ.	-0.022	-0.025**	-0.019**	0.006	-0.292*	-0.107	-0.055**	-0.130	-0.017	0.007
	(0.013)	(0.012)	(0.010)	(0.005)	(0.155)	(0.066)	(0.027)	(0.079)	(0.010)	(0.011)
Basic educ.	-0.004	-0.018	-0.012	0.017***	-0.304*	-0.142**	-0.039	-0.123	-0.008	0.004
	(0.015)	(0.015)	(0.010)	(0.006)	(0.154)	(0.068)	(0.026)	(0.078)	(0.012)	(0.009)
Academic educ.	-0.020	-0.028**	-0.021**	0.016**	-0.237	-0.128*	-0.035	-0.074	-0.026**	0.008
	(0.016)	(0.014)	(0.010)	(0.007)	(0.146)	(0.072)	(0.028)	(0.072)	(0.011)	(0.010)
Observations	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	12,415	5,671
R-squared	0.194	0.116	0.125	0.036	0.135	0.081	0.097	0.121	0.024	0.061
Clusters	215	215	215	215	215	215	215	215	215	204
Mean dep. var	0.365	0.260	0.131	0.0643	1.637	0.683	0.251	0.703	0.07	0.065

*Notes: This table presents regression estimates of child criminal conviction outcomes, as well as the probability of foster care and teen motherhood, on Realized Opportunity in the municipality of assignment for refugee children who arrived in Denmark between 1986 and 1998 at ages 0–17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Crime outcomes are measured up to and including age 30, foster care is measured before age 18, and teen motherhood is defined as giving birth at age 19 or earlier. Teen motherhood is only estimated for the subsample of girls. Teen motherhood is only estimated for the subsample of girls. All regressions control for year-of-arrival and country-of-origin fixed effects in addition to the parental and child characteristics from the balancing tests. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B3: Heterogeneous Effects for Boys

	Boys									
Dependent var.:	(1) Income rank at 26-30	(2) No. criminal convictions	(3) Pr(Criminal conviction)	(4) Years of schooling	(5) Pr(Compulsory school)	(6) Pr(High school)	(7) Pr(Vocational degree)	(8) Pr(Academic degree)	(9) Pr(Married at 30)	(10) Pr(Foster care)
Realized Opportunity	1.258***	-0.195***	-0.006	0.067	-0.012	0.001	0.014**	-0.002	0.006	-0.014***
	(0.449)	(0.074)	(0.011)	(0.058)	(0.010)	(0.004)	(0.007)	(0.008)	(0.006)	(0.005)
Child characteristics										
Age, child	-0.579***	-0.082***	-0.002	-0.122***	0.017***	-0.000	-0.008***	-0.011***	0.021***	-0.001
	(0.117)	(0.021)	(0.002)	(0.011)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Parental characteristics observed by DRC										
Age, parent	-0.073	0.005	-0.001	0.006	-0.000	-0.001	0.000	0.001	-0.000	0.000
	(0.057)	(0.012)	(0.001)	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Male, parent	1.826*	-0.483**	-0.027	0.092	-0.016	0.019**	-0.005	0.004	0.013	-0.024**
	(1.015)	(0.195)	(0.017)	(0.122)	(0.021)	(0.008)	(0.018)	(0.011)	(0.014)	(0.010)
No. of children, ages 0-2	-1.079	0.364***	0.032***	-0.125*	0.028**	-0.018**	0.000	-0.010	0.015	0.013*
	(0.735)	(0.125)	(0.012)	(0.065)	(0.013)	(0.008)	(0.016)	(0.006)	(0.011)	(0.008)
No. of children, ages 3-17	-1.087***	0.216***	0.022***	-0.158***	0.023***	-0.003	-0.005	-0.014***	0.001	0.006**
	(0.272)	(0.062)	(0.003)	(0.023)	(0.004)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)
Married	-0.258	-0.125	-0.021	0.053	-0.016	0.006	0.009	0.003	-0.027	-0.032**
	(1.400)	(0.210)	(0.020)	(0.127)	(0.023)	(0.016)	(0.023)	(0.018)	(0.022)	(0.014)
Parental characteristics unobserved by DRC										
Unknown educ.	1.414	-0.461*	-0.022	0.084	0.008	-0.015	-0.008	0.023*	-0.010	-0.026*
	(1.337)	(0.262)	(0.017)	(0.096)	(0.019)	(0.013)	(0.020)	(0.013)	(0.017)	(0.013)
Basic educ.	1.615	-0.525**	-0.011	0.132	-0.006	-0.002	0.007	0.009	-0.037*	-0.016
	(1.549)	(0.257)	(0.021)	(0.106)	(0.019)	(0.014)	(0.021)	(0.012)	(0.021)	(0.013)
Academic educ.	3.325*	-0.323	-0.030	0.441***	-0.043*	0.002	-0.033*	0.079***	0.007	
	(1.748)	(0.261)	(0.022)	(0.134)	(0.024)	(0.015)	(0.019)	(0.016)	(0.022)	(0.013)
Observations	5,820	6,731	6,731	5,751	5,813	5,813	5,813	5,813	6,034	6,731
R-squared	0.070	0.084	0.072	0.131	0.102	0.028	0.032	0.069	0.090	0.025
Clusters	208	210	210	207	207	207	207	207	207	210
Mean dep. var	41.84	2.766	0.540	12.03	0.440	0.105	0.325	0.119	0.245	
Mean of Realized Opportunity	0.011	0.014	0.014	0.016	0.014	0.014	0.014	0.014	0.005	0.014
SD of Realized Opportunity	0.984	0.994	0.994	0.986	0.987	0.987	0.987	0.987	0.990	

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity. Estimates are reported for boys among refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. All regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B4: Heterogeneous Effects for Girls

	Girls									
Dependent var.:	(1) Income rank at 26-30	(2) No. criminal convictions	(3) Pr(Criminal conviction)	(4) Years of schooling	(5) Pr(Compulsory school)	(6) Pr(High school)	(7) Pr(Vocational degree)	(8) Pr(Academic degree)	(9) Pr(Married at 30)	(10) Pr(Foster care)
Realized Opportunity	1.711***	-0.019	-0.003	0.077	-0.011*	0.001	0.008	0.006	0.009	0.001
	(0.363)	(0.016)	(0.006)	(0.048)	(0.006)	(0.007)	(0.010)	(0.007)	(0.009)	(0.004)
Child characteristics										
Age, child	-1.829***	0.006**	0.005***	-0.210***	0.028***	-0.002	-0.015***	-0.015***	0.018***	-0.001
	(0.105)	(0.003)	(0.001)	(0.011)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)
Parental characteristics observed by DRC										
Age, parent	0.111**	-0.002	-0.002***	0.007	-0.001	0.000	0.001	-0.000	-0.000	-0.001*
	(0.048)	(0.003)	(0.001)	(0.006)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Male, parent	-0.361	-0.031	0.001	-0.031	0.010	-0.001	-0.007	0.002	-0.016	-0.018*
	(1.085)	(0.036)	(0.013)	(0.095)	(0.018)	(0.012)	(0.018)	(0.011)	(0.020)	(0.009)
No. of children, ages 0-2	-3.908***	0.034	0.022**	-0.382***	0.046***	-0.000	-0.026*	-0.024**	0.009	0.005
	(0.763)	(0.025)	(0.010)	(0.067)	(0.013)	(0.008)	(0.015)	(0.011)	(0.013)	(0.007)
No. of children, ages 3-17	-1.010***	-0.009	0.004	-0.171***	0.020***	-0.004	0.004	-0.020***	-0.004	0.001
	(0.205)	(0.010)	(0.003)	(0.028)	(0.005)	(0.003)	(0.005)	(0.005)	(0.004)	(0.002)
Married	0.551	0.005	-0.028*	0.356**	-0.059*	-0.029	0.059**	0.028*	0.033	-0.008
	(1.502)	(0.037)	(0.016)	(0.159)	(0.032)	(0.018)	(0.025)	(0.015)	(0.021)	(0.011)
Parental characteristics unobserved by DRC										
Unknown educ.	-0.405	-0.136***	-0.025	-0.123	0.023	-0.000	-0.039	0.018	-0.027	-0.007
	(1.294)	(0.046)	(0.018)	(0.133)	(0.022)	(0.015)	(0.032)	(0.020)	(0.023)	(0.010)
Basic educ.	-0.192	-0.090*	0.001	-0.033	-0.005	-0.001	0.005	0.003	-0.043*	0.002
	(1.297)	(0.048)	(0.020)	(0.201)	(0.028)	(0.016)	(0.034)	(0.020)	(0.023)	(0.015)
Academic educ.	3.324*	-0.137**	-0.009	0.198	-0.007	0.002	-0.038	0.045**	-0.035	-0.011
	(1.849)	(0.053)	(0.019)	(0.182)	(0.025)	(0.016)	(0.034)	(0.021)	(0.022)	(0.013)
Observations	4,640	5,671	5,671	4,686	4,735	4,735	4,735	4,735	4,960	5,671
R-squared	0.166	0.019	0.029	0.224	0.158	0.026	0.033	0.123	0.085	0.034
Clusters	200	204	204	200	200	200	200	200	204	204
Mean dep. var	34.93	0.299	0.156	12.66	0.336	0.102	0.387	0.165	0.402	0.0503

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Estimates are reported for girls among refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. All the regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are reported in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B5: Heterogeneous Effects by Parental Education Level (High)

	High Education											
Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Pr(Criminal conviction)	(5) Years of schooling	(6) Pr(Compulsory school)	(7) Pr(High school)	(8) Pr(Vocational degree)	(9) Pr(Academic degree)	(10) Pr(Married at 30)	(11) Pr(Foster care)	(12) Pr(Teenage motherhood)
Realized Opportunity	2.225***	1.764***	-0.211***	-0.015	0.170*	-0.021*	0.001	0.006	0.015	-0.008	-0.005	-0.010
	(0.905)	(0.745)	(0.072)	(0.010)	(0.089)	(0.011)	(0.006)	(0.008)	(0.013)	(0.011)	(0.005)	(0.007)
Child characteristics												
Age, child	-1.340***	-0.239	-0.029	0.004	-0.169***	0.021***	-0.002	-0.004	-0.017***	0.021***	-0.002	0.007***
	(0.166)	(0.161)	(0.021)	(0.003)	(0.017)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)
Male, child	4.608***	0.581	2.435***	0.366***	-0.642***	0.095***	0.020*	-0.084***	-0.032*	-0.125***	0.021***	
	(1.293)	(1.019)	(0.197)	(0.025)	(0.131)	(0.025)	(0.012)	(0.021)	(0.018)	(0.018)	(0.008)	
Parental characteristics observed by DRC												
Age, parent	0.199*	-0.506***	-0.033**	-0.004**	0.050***	-0.007**	0.000	0.004*	0.003	0.000	-0.001	-0.001
	(0.104)	(0.120)	(0.013)	(0.002)	(0.011)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)
Male, parent	1.085	3.415**	-0.173	-0.021	0.142	-0.015	-0.012	0.011	0.017	0.061**	-0.017	-0.012
	(2.147)	(1.537)	(0.279)	(0.023)	(0.175)	(0.031)	(0.017)	(0.033)	(0.023)	(0.024)	(0.017)	(0.023)
No. of children, ages 0-2	-1.626	-3.604**	-0.207	-0.002	-0.045	-0.018	0.001	0.048**	-0.035*	0.036*	-0.007	0.015
	(1.684)	(1.408)	(0.219)	(0.018)	(0.141)	(0.024)	(0.014)	(0.023)	(0.020)	(0.020)	(0.015)	(0.010)
No. of children, ages 3-17	-1.968***	-1.773***	0.088	0.007	-0.258***	0.029***	-0.004	-0.002	-0.026***	0.009	-0.003	0.009*
	(0.398)	(0.553)	(0.070)	(0.005)	(0.043)	(0.008)	(0.005)	(0.007)	(0.005)	(0.008)	(0.004)	(0.005)
Married	0.317	4.440	0.589**	0.044	-0.423	0.084	-0.040	-0.010	-0.032	0.075*	-0.016	0.044*
	(3.795)	(2.712)	(0.271)	(0.056)	(0.408)	(0.066)	(0.032)	(0.061)	(0.069)	(0.044)	(0.039)	(0.024)
Observations	1,946	1,844	2,319	2,319	1,948	1,965	1,965	1,965	1,965	2,073	2,319	1,080
R-squared	0.116	0.177	0.156	0.195	0.189	0.128	0.024	0.045	0.122	0.108	0.039	0.076
Clusters	152	151	156	156	153	153	153	153	153	153	156	142
Mean dep. var	41.39	15.45	1.571	0.354	12.74	0.344	0.117	0.333	0.197	0.307	0.0552	0.0611

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy, restricting the sample to those whose first-arriving parent had high education (academic education) at arrival. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Teen motherhood is estimated only for the subsample of girls. All regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B6: Heterogeneous Effects by Parental Education Level (Low)

	Low Education											
Dependent var.:	(1) Income rank at 26-30	(2) Parental income rank	(3) No. criminal convictions	(4) Pr(Criminal conviction)	(5) Years of schooling	(6) Pr(Compulsory school)	(7) Pr(High school)	(8) Pr(Vocational degree)	(9) Pr(Academic degree)	(10) Pr(Married at 30)	(11) Pr(Foster care)	(12) Pr(Teenage motherhood)
Realized Opportunity	1.280***	0.894**	-0.090**	-0.003	0.045	-0.010	0.001	0.012	-0.002	0.012*	-0.008*	-0.004
	(0.289)	(0.352)	(0.044)	(0.007)	(0.050)	(0.009)	(0.004)	(0.008)	(0.006)	(0.007)	(0.004)	(0.004)
Child characteristics												
Age, child	-1.098***	-0.094*	-0.044***	0.001	-0.161***	0.023***	-0.001	-0.013***	-0.012***	0.019***	-0.001	0.007***
	(0.089)	(0.054)	(0.014)	(0.001)	(0.008)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Male, child	7.664***	-0.204	2.448***	0.366***	-0.586***	0.104***	0.000	-0.058***	-0.046***	-0.163***	0.039***	
	(0.663)	(0.354)	(0.113)	(0.010)	(0.042)	(0.009)	(0.007)	(0.013)	(0.008)	(0.008)	(0.006)	
Parental characteristics observed by DRC												
Age, parent	-0.021	-0.549***	0.007	-0.001	0.002	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000
	(0.049)	(0.029)	(0.007)	(0.001)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Male, parent	0.944	3.987***	-0.334***	-0.014	0.025	-0.005	0.015**	-0.008	0.000	-0.012	-0.023***	-0.006
	(0.863)	(0.661)	(0.113)	(0.012)	(0.088)	(0.018)	(0.008)	(0.013)	(0.008)	(0.015)	(0.007)	(0.008)
No. of children, ages 0-2	-2.577***	-2.367***	0.294***	0.033***	-0.278***	0.047***	-0.011**	-0.025**	-0.013*	0.009	0.012*	0.018**
	(0.596)	(0.451)	(0.082)	(0.009)	(0.062)	(0.011)	(0.006)	(0.010)	(0.007)	(0.009)	(0.007)	(0.007)
No. of children, ages 3-17	-0.909***	-1.261***	0.120***	0.014***	-0.149***	0.021***	-0.004**	-0.001	-0.015***	-0.003	0.005***	0.007**
	(0.197)	(0.200)	(0.039)	(0.003)	(0.024)	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)
Married	-0.061	0.154	-0.110	-0.029***	0.243***	-0.046***	-0.006	0.035**	0.018	-0.006	-0.021**	-0.010
	(0.954)	(0.862)	(0.119)	(0.014)	(0.120)	(0.021)	(0.014)	(0.016)	(0.013)	(0.016)	(0.010)	(0.014)
Parental characteristics unobserved by DRC												
Unknown educ.	0.511	0.066	-0.321**	-0.024*	-0.007	0.016	-0.009	-0.023	0.021*	-0.016	-0.017*	0.007
	(0.912)	(0.683)	(0.154)	(0.013)	(0.086)	(0.015)	(0.009)	(0.018)	(0.012)	(0.014)	(0.010)	(0.011)
Basic educ.	0.569	-1.032	-0.310**	-0.002	0.045	-0.004	-0.000	0.005	0.005	-0.040***	-0.008	0.005
	(1.035)	(0.766)	(0.155)	(0.015)	(0.117)	(0.017)	(0.010)	(0.019)	(0.013)	(0.015)	(0.012)	(0.009)
Observations	8,522	7,885	10,091	10,091	8,501	8,595	8,595	8,595	8,595	8,931	10,091	4,585
R-squared	0.104	0.213	0.137	0.199	0.171	0.127	0.025	0.031	0.084	0.113	0.027	0.062
Clusters	211	210	213	213	211	211	211	211	211	211	213	201
Mean dep. var	38.19	10.87	1.653	0.367	12.22	0.404	0.101	0.357	0.126	0.318	0.0731	0.0654

*Notes: Notes: This table reports regression estimates of a broad set of outcomes on Realized Opportunity for refugee children aged 0–17 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy, restricting the sample to those whose first-arriving parent had low education (non-academic education) at arrival. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. Column-specific sample sizes reflect outcome-specific register availability and the age at which the outcome is measured. Teen motherhood is estimated only for the subsample of girls. All regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B7: Heterogeneous Effects Across Country-of-Origin Groups

	Africa			Middle East			Asia, excluding the Middle East		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent var.:	Income rank at 26-30	Parental income rank	No. criminal convictions	Income rank at 26-30	Parental income rank	No. criminal convictions	Income rank at 26-30	Parental income rank	No. criminal convictions
Realized Opportunity	1.264	2.419*	-0.464***	1.558***	0.945***	-0.118**	1.160	0.619	0.054
	(0.992)	(1.377)	(0.133)	(0.355)	(0.319)	(0.053)	(0.798)	(0.619)	(0.044)
Child characteristics									
Age, child	-0.487**	-0.342***	-0.098***	-1.264***	-0.169***	-0.050***	-1.088***	-0.086	0.001
	(0.214)	(0.109)	(0.032)	(0.100)	(0.062)	(0.020)	(0.144)	(0.090)	(0.011)
Male, child	-2.577	-1.208	3.550***	8.201***	-0.313	2.885***	7.710***	1.345*	0.838***
	(1.582)	(0.956)	(0.282)	(0.821)	(0.411)	(0.105)	(1.153)	(0.714)	(0.098)
Parental characteristics observed by DRC									
Age, parent	-0.087	-0.366***	-0.002	-0.091	-0.362***	0.002	0.165**	-0.701***	0.000
	(0.125)	(0.077)	(0.021)	(0.055)	(0.036)	(0.009)	(0.081)	(0.053)	(0.005)
Male, parent	2.918	3.028*	-0.477	0.840	3.125***	-0.258*	-0.529	4.971***	-0.070
	(2.427)	(1.681)	(0.301)	(1.108)	(0.728)	(0.153)	(1.640)	(1.247)	(0.105)
No. of children, ages 0-2	0.001	0.827	-0.279	-3.085***	-2.487***	0.221***	-1.342	-2.167**	0.373**
	(1.417)	(1.637)	(0.218)	(0.630)	(0.446)	(0.081)	(1.537)	(1.029)	(0.147)
No. of children, ages 3-17	0.509	0.012	0.007	-1.507***	-1.317***	0.170***	-0.668*	-1.994***	0.050
	(0.414)	(0.436)	(0.072)	(0.281)	(0.204)	(0.061)	(0.372)	(0.318)	(0.034)
Married	-2.637	3.047	0.164	-0.771	-0.173	-0.099	1.812	1.274	0.020
	(3.323)	(2.624)	(0.308)	(1.407)	(0.998)	(0.171)	(1.592)	(1.722)	(0.108)
Parental characteristics unobserved by DRC									
Unknown educ.	5.517***	-2.378	-1.733***	-0.561	0.580	-0.013	0.679	-0.051	-0.146
	(2.070)	(2.383)	(0.436)	(1.121)	(0.714)	(0.202)	(2.009)	(1.721)	(0.162)
Basic educ.	2.719	-0.017	-1.613***	0.146	-0.889	-0.089	0.130	-1.612	-0.028
	(1.841)	(2.350)	(0.420)	(1.458)	(0.967)	(0.199)	(1.895)	(1.646)	(0.169)
Academic educ.	5.123**	1.758	-0.370	2.892*	3.740***	-0.108	2.679	0.457	-0.136
	(2.328)	(2.251)	(0.562)	(1.616)	(1.140)	(0.199)	(2.177)	(2.138)	(0.188)
Observations	1,054	923	1,422	6,711	6,284	7,945	2,635	2,461	2,950
R-squared	0.081	0.302	0.191	0.110	0.156	0.131	0.058	0.227	0.078
Clusters	86	82	96	183	181	187	151	149	154
Mean dep. var	32.48	14.02	2.525	37.10	11.95	1.865	45.60	16.84	0.618

*Notes: This table reports regression estimates of child income rank at ages 26-30, parental income rank at ages 24-28, and the number of criminal convictions up to and including age 30 on Realized Opportunity for refugee children who arrived in Denmark between 1986 and 1998 at ages 0-17, immigrated within one year of their parents' arrival, and were subject to the dispersal policy. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. The sample is split into three origin groups: Africa, the Middle East, and Asia (excluding the Middle East). Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. All the regressions include year-of-arrival and country-of-origin fixed effects. Standard errors are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

Table B8: Heterogeneous Effects Across Age-at-Arrival Groups

Age group:	0-5	6-11	12-17	18-22	0-5	6-11	12-17	18-22
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent var.:	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	Income rank at 26-30	No. criminal convictions	No. criminal convictions	No. criminal convictions	No. criminal convictions
Realized Opportunity	1.029**	1.515***	1.844***	2.826***	-0.112*	-0.229***	0.055	-0.204***
	(0.461)	(0.483)	(0.547)	(1.023)	(0.061)	(0.066)	(0.086)	(0.068)
Parental characteristics observed by DRC								
Age, parent	0.054	0.007	0.096	0.134	-0.006	0.011	-0.005	-0.019
	(0.084)	(0.064)	(0.071)	(0.122)	(0.012)	(0.009)	(0.009)	(0.015)
Male, parent	1.240	0.810	-1.105	-2.247	-0.509***	-0.242*	0.041	0.076
	(1.340)	(1.402)	(1.346)	(1.669)	(0.170)	(0.141)	(0.142)	(0.090)
No. of children, ages 0-2	-2.756***	-2.905***	-0.121	1.488	0.273***	-0.335***	0.351*	-0.160
	(0.973)	(0.799)	(1.643)	(2.095)	(0.086)	(0.123)	(0.209)	(0.227)
No. of children, ages 3-17	-1.423***	-1.325***	-0.703***	-0.414	0.124**	0.135**	0.016	-0.072
	(0.276)	(0.250)	(0.249)	(0.576)	(0.049)	(0.052)	(0.095)	(0.065)
Married	-1.887	0.377	0.315	2.385	0.031	-0.130	-0.095	-0.096
	(1.815)	(1.299)	(1.445)	(2.118)	(0.170)	(0.202)	(0.174)	(0.165)
Child characteristics								
Age, child	-0.845**	-0.938***	-1.455***	-2.867***	0.074*	-0.088***	-0.096**	-0.037
	(0.338)	(0.258)	(0.283)	(0.679)	(0.040)	(0.028)	(0.043)	(0.041)
Male, child	4.035***	6.102***	12.423***	14.927***	2.735***	2.558***	1.707***	0.502***
	(1.146)	(0.804)	(0.901)	(1.576)	(0.141)	(0.140)	(0.122)	(0.151)
Parental characteristics unobserved by DRC								
Unknown educ.	0.085	0.632	0.273	-1.386	-0.634**	-0.058	0.003	-0.315**
	(1.628)	(1.460)	(1.509)	(4.537)	(0.248)	(0.204)	(0.185)	(0.157)
Basic educ.	-0.218	0.764	1.057	0.752	-0.529*	-0.192	-0.040	0.234
	(1.891)	(1.511)	(1.481)	(4.747)	(0.269)	(0.185)	(0.208)	(0.263)
Academic educ.	3.359	3.581**	2.506	-0.218	-0.321	-0.323	0.068	0.007
	(2.125)	(1.791)	(1.801)	(5.568)	(0.225)	(0.197)	(0.251)	(0.231)
Observations	3,447	4,284	2,726	560	5,081	4,539	2,781	568
R-squared	0.060	0.096	0.163	0.268	0.157	0.148	0.106	0.218
Clusters	195	201	184	106	206	201	184	107
Mean dep. var	43.47	39.31	32.10	23.08	43.46	39.31	32.10	23.08

*Notes: This table reports regression estimates of child income rank at ages 26–30 and parental income rank (measured at ages 24–28) on Realized Opportunity. Realized Opportunity is the predicted child income rank at ages 26–30 for parents at the 25th percentile, estimated by municipality × birth cohort using permanent-resident families (see Section 4) and is standardized to have mean zero and standard deviation one. Estimates are reported separately for parents with high versus low education at arrival (academic versus non-academic education) for refugee children aged 0–22 at arrival who immigrated to Denmark within one year of their parents' arrival between 1986 and 1998 and were subject to the dispersal policy. Child and parental characteristics are measured at arrival; parental characteristics refer to the first-arriving parent. All the regressions include year-of-arrival and country-of-origin fixed effects. Robust standard errors, clustered at the municipality level, are shown in parentheses. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.*

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