Wealth Inequality: Opportunity for Me or for Others?*

Michael Haliassos, Thomas Jansson, and Yigitcan Karabulut†

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Abstract

We provide evidence for a new propagation mechanism of wealth inequality and mobility. Using unique administrative data and a quasi-field experiment of exogenous assignment, we find that educated entrants, faced with greater local wealth inequality and salient cases of wealth mobility, take financial, real, and self-employment risks and reach higher positions in the wealth distribution, while the less educated do not. This is driven by poorer communities with more salient cases of wealth mobility, consistent with peer exposure rather than supply-side effects. We find no evidence for other channels, such as obtaining higher-paying more secure jobs, relocating, or reducing debt.

JEL classification: G5, E21, E44, D31, D1.

Keywords: Household finance, wealth inequality, education, opportunity, refugees.

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†Haliassos: Goethe University Frankfurt & CEPR, Theodor-W.-Adorno-Platz 3, 60323 Frankfurt am Main, Germany, Haliassos@wiwi.uni-frankfurt.de. Jansson: Sveriges Riksbank, thomas.jansson@riksbank.se. Karabulut: Frankfurt School of Finance and Management, y.karabulut@fs.de.

1 Introduction

Rising wealth inequality and stagnating economic mobility in many developed countries have reignited intense debates in both the academic and public spheres (Chetty et al., 2014; Piketty, 2014). These trends challenge fundamental principles of modern economies, such as meritocracy and equal opportunity, and have far-reaching implications, including weakened social cohesion, increasing polarization, and a resurgence of populism. While considerable attention has been devoted to identifying the sources of wealth inequality and economic mobility (Benhabib and Bisin, 2018; De Nardi and Fella, 2017; Chetty and Hendren, 2018a,b), their interaction remains underexplored. Indeed, even within a given country, wealth inequality and mobility vary significantly across regions (Chetty et al., 2014), shaping individuals' access to economic opportunities and their broader social environment. Understanding how differences in regional wealth inequality and mobility interact to impede or propel the movement along the wealth distribution of those just starting their careers, especially if they start at the bottom, is critical to understanding the propagation of wealth inequality, the responsiveness of different groups to wealth mobility opportunity, and some of the enduring sources of social polarization.

Wealth concentration at the top, coupled with examples of people in the local environment who have managed to improve their position in the wealth distribution significantly, can serve as an ambiguous signal to individuals starting their careers. For some, particularly those who can identify and exploit economic opportunities, this can signal their own potential for upward mobility, leading them to take steps to accumulate wealth, such as investing in risky assets or starting a business. Others, however, may interpret local wealth disparities and success stories as indicative of what others can achieve, leaving them behind. These differential responses to the combination of local wealth inequality and mobility are likely to depend on the ability to acquire and process information and to manage risk without being destroyed by it, as reflected in educational attainment. However, local wealth inequality without salient examples of wealth mobility is unlikely to motivate and inspire positive responses.

This paper examines whether and how greater early-career exposure to local wealth inequality and to salient examples of upward wealth mobility in the local community causes some to reach higher ranks in their cohort-specific wealth distribution in the medium

to longer run, while it fails to move others, leaving them behind. Greater local wealth inequality means not only greater local disparities in wealth, but also more limited segregation between rich and poor households for any given level of overall wealth inequality in the country.

To address this question empirically, we exploit Sweden's refugee settlement policy, a unique quasi-natural experiment that created exogenous variation in refugees' initial locations by assigning newly arrived, destitute households to apartments across the country that were randomly becoming available, without allowing them to choose their location. This policy represents one of the few instances in modern democratic societies where people are exogenously assigned to different locations on such a large scale, providing a rare setting for empirical testing. The refugees began their economic lives destitute, at the bottom of the wealth distribution, ensuring that initial differences in wealth do not confound our analysis. As newcomers in an unfamiliar environment, refugees had to observe their new economic environment, including the actions of those around them, upon arrival, allowing us to time the formative observation of local conditions. Our analysis uses a rich household panel dataset spanning over two decades, allowing us to track household wealth trajectories and location, both geographic and in the aggregate cohort-specific wealth distribution, while controlling for aggregate conditions, cultural factors, and regional characteristics. Using this empirical setting, we estimate the causal effects of local conditions and experiences on wealth accumulation and wealth mobility over the medium to longer term, uncovering a role of peer influences (salient wealth contrasts and examples of success) as a key mechanism for propagating wealth mobility and inequality.

We document that initial exposure to greater local wealth inequality, as measured by the top 10% wealth share in a refugee's assigned neighborhood, leads college-educated individuals to a higher rank in the wealth distribution ten to twenty years later, while no such effects are observed for less educated refugees. Importantly, local wealth inequality motivates better-educated households only where local wealth mobility opportunities are prevalent. In areas with limited wealth mobility, exposure to wealth inequality does not elicit significant responses, regardless of educational attainment. The estimated effects are economically meaningful: a one standard deviation increase in wealth inequality in the initial municipality raises the rank of better-educated households in the birth-cohort national wealth distribution by 7.2 percentiles 10 to 20 years later.

We explore the reasons for these findings and verify their robustness through extensive sensitivity checks, including varying the geographic definition of the local environment to refer to municipalities or parishes, exploiting either only the time-series variation in wealth inequality within initial neighborhoods or also the cross-sectional variation across those neighborhoods, and showing the impact also on continuous measures of household wealth, such as the wealth level or the financial wealth-to-income ratio.

Further analysis reveals that the observed differential responses of the two education groups are not driven trivially by favorable supply-side conditions supporting wealth generation and mobility of the educated. Rather than being observed in the richer areas, the responses are observed in the poorer ones, and are stronger where the upward wealth movement of successful neighbors is more salient to the career starters. Since we observe the precise dwelling-level placement of refugees, we can assess whether they were placed next to neighbors who were successful in moving up in the wealth distribution, the share of those in the neighborhood, and the size of the wealth increase they experienced. Greater effects are observed when the share of upward-mobile neighbors in the poor areas is greater, the size of their wealth increase is larger, and where the wealth of the rich is more conspicuous, as reflected in a sizeable housing component. Importantly, we can isolate the social effects from correlated neighborhood characteristics by incorporating various specifications of regional fixed effects, including for the parish, the smallest administrative unit in Sweden.

We then examine the channels through which these peer effects of a "brush with success" operate. We find that the educated respond to wealth inequality and mobility by increasing their participation in risky financial and real assets and by pursuing self-employment, while the less educated do not exhibit similar risk taking in the medium to longer term. Beyond risk-taking, we find no evidence of alternative channels of response, such as the educated acquiring higher-paying and more secure jobs, relocating, or avoiding debt burden.

Our findings highlight the role of local wealth inequality and non-segregation by wealth level in shaping economic behavior, and their distributional implications for mobility and wealth accumulation through the differential effects by education. The policy implications are nuanced. They highlight the importance of avoiding segregation by wealth level and ensuring co-existence of wealthier and less wealthy households in

poorer areas, as a factor motivating the educated career starters to take risks and move up the aggregate wealth distribution. However, they also show that local wealth inequality and mobility cannot be relied upon to move the less educated career starters, leaving them behind. Finding ways to empower lower-educated households to manage risks without being destroyed by them could contribute to breaking this response asymmetry. A mere extension of mandatory education is unlikely to be effective, given the ongoing debate on an exogenous impact of education on wealth accumulation and portfolio returns.[1] We view our findings as consistent with a multi-pronged approach, aimed at improving perception of opportunities among the less educated, financial knowledge and ability to use existing risky investment products for wealth creation, as well as design of securities that help overcome biases (on the latter, see Calvet, Celerier, Sodini, and Vallee (2023)).

Related literature supports various aspects of our analysis. Recent research has found a close positive correlation between educational attainment and returns on net wealth and on each of its main sub-components (see Girshina (2019) for Swedish data and Fagereng, Guiso, Holm, and Pistaferri (2020) for Norway), while Barth, Papageorge, and Thom (2020) find a positive relation between educational attainment and retirement wealth among US households and Rustichini et al. (2023) provide further support for the importance of intelligence. Kuhnen and Miu (2017) and Das, Kuhnen, and Nagel (2019) use experimental data and survey data from nearly forty years of the Michigan Survey of Consumers, respectively, and find that individuals with lower socioeconomic status (SES), in terms of education level and income rank within year-age groups, tend to have significantly lower subjective return expectations. They argue that these account for a large part of the total effect of the SES variables on the decisions to participate in stocks and in homeownership, with estimates of up to 47% and 25%, respectively. Recent research in perception, cognition, and developmental and social psychology focusing on perception of inequality stresses the importance of interpersonal comparisons, media attention, and physical attributes of the built environment as informational cues on local economic inequality that people receive from their environment (Phillips et al., 2020; Suss, 2021). Such cues are likely to be more abundant and better processed by the more edu-

[1]There is debate as to whether educational attainment has an exogenous effect on returns (Girshina, 2019) or it is jointly determined with returns by innate ability (Fagereng et al., 2020), consistent with recent evidence on the importance of genetic markers (Barth et al., 2020).

cated.

Links to literature Our work relates to several strands of literature. An important link is to the literature on wealth inequality. The relationship between investment in financial education and expected returns for wealth inequality was modeled by Lusardi, Mitchell, and Michaud (2017), and empirically validated by Altmejd, Jansson, and Karabulut (2024). The importance of asset returns for wealth inequality was demonstrated by Benhabib, Bisin, and Zhu (2011), who showed that idiosyncratic rates of return govern the right tail of the wealth distribution, rather than income risk. Gabaix, Lasry, Lions, and Moll (2016) showed that persistently high returns can generate distributions with a fat right tail. A link between higher wealth level and higher returns was documented empirically by Bach et al. (2020), Fagereng et al. (2020), and Benhabib, Bisin, and Luo (2019) using Swedish, Norwegian, and US data, respectively.

Our paper links to the fast growing literature on peer effects on financial behavior, recently surveyed in Gomes, Haliassos, and Ramadorai (2021) and in Kuchler and Stroebel (2021), and it also relates to a multifaceted strand of literature highlighting the importance of exposure to surrounding conditions for subsequent behavior. The importance of neighborhood conditions for educational attainment and future income levels has been studied in the literature on the "Moving to Opportunity" experiment (MTO). This offered randomly selected families living in high-poverty housing projects housing vouchers to move to lower-poverty neighborhoods. Chetty et al. (2016) found that this improved college attendance rates and earnings for children who were below age 13 when their families moved, but not for older ones.[2] Malmendier and Nagel (2011) demonstrated the link between exposure to stock returns and subsequent stock market participation. Kuhnen and Miu (2017) and Das et al. (2019) focused instead on the exposure to current macroeconomic conditions and to their variations over the business cycle.

Our findings on differential financial response of the more educated to wealth inequality in areas with high wealth mobility parallel and extend to wealth inequality features of models of motivated beliefs (Bénabou and Tirole, 2006), originally built for work behavior and income inequality: some individuals perceive successes of others as signs of a fair world, use those as motivating drivers for their own efforts, and interpret their own successes as ratifying their beliefs.

[2]See also Ludwig et al. (2013); and Derenoncourt (2022) on MTO in the Great Migration, 1940-70.

Finally, the quasi-random experiment of refugee allocation has been fruitfully used in other papers for very different purposes.[3]

Section 2 describes the identification strategy, in view of relevant features of the refugee allocation program and of the data, and presents the estimation model. Section 3 presents the estimated effects of exposure to local wealth inequality and how they depend on wealth mobility opportunities. Section 4 tests for possible mechanisms through which exposure to wealth inequality and mobility opportunities affects future wealth. Section 5 offers concluding remarks.

2 The Identification Strategy and the Data

2.1 Relevant Features of the Refugee Allocation Program

In our empirical analysis, we focus on a unique, quasi-random field experiment of exogenous allocation of destitute refugees to areas whose local inequality and wealth mobility opportunities they could not have anticipated, at a time that was - by definition - the launch of their economic life in the new country. Specifically, we exploit a Swedish policy of exogenously allocating refugees to available apartments shortly after they obtained their residence permit, in response to congestion arising from self allocation of refugees in major cities in the past.[4] The experiment was implemented between 1985 and 1994, but most strictly between 1987 and 1991, the period of entry on which we are focusing. Participation of Sweden's municipalities in the program was extensive, with 277 out of 284 municipalities participating. The Swedish Immigration Board was authorized to allocate refugees who moved to Sweden for reasons other than family reunification to apartments, as these were becoming available. Using STATIV data, described in section 2.2, we are able to identify precisely the refugees, among migrants to Sweden in the relevant period, who were not being reunited with family members, had limited resources, and

[3] Edin, Fredriksson, and Åslund (2003) study the consequences of living in enclaves for labor market outcomes. Åslund and Fredriksson (2009) study peer effects in welfare use among refugees, Åslund, Edin, Fredriksson, and Grönqvist (2011) focus on the extent to which immigrant school performance is affected by the characteristics of neighborhoods in which they grew up, while Haliassos, Jansson, and Karabulut (2020) study financial literacy externalities from neighbors with business or economics education.

[4] For further details about this policy experiment, used in another context, see Edin et al. (2003) pp. 333-335.

therefore little choice but to reside in the apartment allocated by the municipal officers. Nevertheless, about one third of the refugee sample had at least some college education. We are also able to observe any subsequent movements of the refugees to other areas for a period of about 20 years after the initial placement.

Our causal analysis relies on the assumption that, given the observed characteristics of the refugees, the wealth inequality to which they were exposed at the region of initial placement is independent of unobserved refugee characteristics that influence the probability of taking specific actions or experiencing specific individual outcomes ten to twenty years later in life.

The way in which the placement program assigned refugees to particular apartments is important for the validity of this identification assumption. Did the Immigration Board have information additional to what we observe in the data when allocating refugees to apartments? Importantly, no personal interviews were conducted, and our data include all refugee information available to the Immigration Board when deciding the initial allocation of refugees. According to the process narratives, the Board mainly based its decision on the random arrival of available apartments, but may have also taken into consideration the language spoken by the refugees, their marital status in view of the limited availability of smaller apartments, and their education level (Åslund and Fredriksson, 2009; Åslund et al., 2011). All three factors are included in our data. Specifically, we control for the country of origin and year of arrival of the refugee, the refugee's education level, marital status, household size, and number of children, in addition to other observable characteristics relevant for financial behavior. The Board also asked refugees to declare their location preferences, and these were not recorded in the data. However, as other studies based on this data have noted, personal preferences of refugees are unlikely to have played an important role in the allocation decision for at least three reasons. First, the program was implemented specifically because the unrestricted free choice of refugees resulted in extreme congestion in major metropolitan cities. Second, the initial refugee allocation generated by the Immigration Board was different from the previous migrant concentration. Finally, about 60 percent of refugees had moved from the place of their initial placement by the year 2000. This move occurred despite the fact that their immediate relocation was essentially precluded by their limited means and short-term benefits, such as language classes; and that they ended up spending, on average, 8.7

years in their initial municipality.

As a further check of possible sorting, we regress our key measure of local wealth inequality (the share of the top 10 percent in total household wealth at the time of refugee arrival) in the initial municipality on characteristics of the refugees observable to municipal officers. As seen in Table O.A.1, we include gender, marital status, household size, having children, educational attainment, and age group controls, as well as municipality, country of origin, and arrival year fixed effects. The measure of exposure to local wealth inequality at the time of arrival is independent of initial refugee household characteristics observable to municipal officers, including those they might have reportedly taken into account.

Finally, as we describe in detail in Section 2.3, we also include in our model controls for specific time-varying conditions in the municipality of initial placement, as well as for time-invariant factors through fixed effects, and we estimate the effect of initial exposure to local wealth inequality net of those conditions.

2.2 The Household Panel Data

We employ two datasets from Statistics Sweden, LINDA and STATIV. The period of interest spans the main years of operation of the immigration allocation program, 1987-1991, to the last year in the period 1999-2007 in which Sweden imposed the wealth tax and was collecting detailed financial data to compute taxable net wealth. This combination of two datasets allows us not only to observe a significant number of refugee households but also to identify those who had little possibility or prospect to not accept the offer of an apartment made by the immigration authorities, at least in the first instance. The advantage of using administrative data collected for the purpose of taxing net wealth is the high quality of reporting, both of the amounts of assets and of debt that could be set off against assets in order to reduce the wealth tax liability. The data are not reported by households themselves, but by the relevant Swedish institutions.[5]

LINDA provides data on an annual sample of around 300,000 individuals (about 3% of the Swedish population) and their family members, and an additional sample of 200,000

[5]Demographic characteristics relate to the "household head", as determined by the Canberra definition, while income, wealth, and its components refer to the household. See Haliassos et al. (2017) for further details.

immigrant individuals, representing about 20% of all immigrants. Importantly, the data include detailed demographic and financial characteristics, but also precise locational information over the entire period, tracking any relocations. The extensive financial data come from the data collected for purposes of wealth taxation and refer to the period 1999-2007 only. Given that we look at refugees with very limited means at the time of arrival, focusing on their medium to longer run financial profile and outcomes is relevant.

STATIV provides extensive data on immigrants, collected from a variety of Swedish registers. Particularly relevant for us are data on reasons for immigration, allowing us to distinguish between refugee and labor immigrants. Even within refugee immigrants, we are able to focus on refugees who were admitted for humanitarian reasons and with insufficient resources, and thus had little choice as to whether to accept the apartment offered to them by the immigration authorities, coupled with opportunities for integrating in Sweden (e.g., through language classes). Specifically, we are able to exclude refugees who came to Sweden for reasons related to work, family ties, studies, other reasons, as well as those with sufficient living supplies. We also exclude those refugee households who first appear in LINDA with an adult member previously residing in Sweden or holding Swedish citizenship. As an extra step, we only consider immigrant households that first appear in LINDA in the year of immigration or in the immediately following year.

We also make sure that, for households included in the final sample, we can observe both the initial location and the full set of locations in the 1999-2007 period, as well as the year of arrival and the country of origin.

After taking all these steps to avoid misclassifying immigrants, we end up with a final sample of about 5,105 refugee immigrants per observation year (i.e., in the period 1999-2007). As shown in Table O.A.2, more than half of our refugee sample entered Sweden in 1988 or 1989, and relatively few entered in 1991, with all remaining refugees in the sample arriving in 1987 or 1990. Iran was the country of origin for the largest group of refugees (about 28% of the sample), but other relatively large groups came from Chile (about 12%), Iraq and Lebanon (about 9% each).

A first look at the data is provided in Figure I, which shows the medium-term evolution of the average net wealth of refugee households during the period 1999-2007, based on their initial assignment to municipalities. It compares the evolution of average net wealth of households initially exposed to higher and lower local wealth inequality, (at

the municipality level) distinguishing between better and less educated households. In panel (a) we focus on those placed in municipalities with high wealth mobility, while in panel (b) we focus on those placed in municipalities with low wealth mobility. The raw data suggest that among households placed in high wealth mobility areas, the educated, who faced higher local wealth inequality at entry, achieved higher average wealth levels in the medium to long run compared to those educated households who faced lower initial wealth inequality (Panel a, left). Initial exposure to local wealth inequality does not seem to be relevant for the subsequent evolution of average wealth when we look at the less educated group, despite the presence of opportunities for wealth mobility (Panel a, right). Panel (b) shows that in municipalities with limited opportunities for wealth mobility, initial exposure to wealth inequality does not seem to be relevant for the subsequent evolution of wealth of either the educated (panel b, left) or the less educated (panel b, right) group.

Data on the evolution of wealth shares by education are not readily available over a longer horizon and across countries, to the best of our knowledge. Such tracking is possible for the US, using the Survey of Consumer Finances and Financial Accounts. Figure O.A.1 shows that, between 1990 and 2020, the share of household wealth held by households whose financial respondent had at least a college degree grew at the expense of every other education category, but especially of those without any college education (see also Bartscher, Kuhn, and Schularick (2020)).

2.3 The Estimation Model

Our hypothesis is that exposure to greater local wealth inequality at the start of economic life causes the college-educated, who are located in areas with greater opportunities for wealth mobility, to make investments in risky real and financial assets and thus to achieve higher wealth level and rank in the medium to long run. In contrast, exposure to greater local wealth inequality fails to motivate the less educated, regardless of the opportunities for wealth mobility in the area, as well as the more educated who are located in areas with no pronounced opportunities for wealth mobility. We hypothesize that this uneven outcome by educational attainment is not an automatic consequence of the presence or absence of opportunity, but a consequence of the different ways in which educated peo-

ple respond to their exposure to local wealth inequality compared to their less educated counterparts. We take several steps to test this hypothesis, rule out others, and understand the mechanism at work.

We measure initial local wealth inequality, $WINEQ_{m0}$, as reflected in the share of total household taxable wealth owned by the top 10% of the wealth distribution in the region of initial placement, m, at the time of the refugee's arrival, $0 \in [1987, 1988, 1989, 1990, 1991]$.[6] We consider various outcomes observed about ten to twenty years later, at times $t \in [1999, 2000, ..., 2007]$. We focus on the net wealth rank in the cohort-specific wealth distribution as the key outcome, but we also consider the level of net wealth and the ratio of financial wealth to labor income for robustness.[7]

In the benchmark estimation, we consider the municipality of initial placement as the relevant region for exposure to local wealth inequality, and we include fixed effects for the municipality or fixed effects for the county in which the municipality is located as two ways to control for correlated effects, namely conditions in the common environment. At the time of implementation of the program, Sweden had 284 municipalities (of which 277 participated in the refugee allocation process) and 24 counties. In a further robustness

[6]We compute the top 10% wealth share from the full LINDA sample, by region and year of arrival. As this is taxable net wealth, it is bounded below by zero but is reported for all households (until 1993). Using taxable wealth raises the issue of how taxable wealth inequality compares to net wealth inequality. We check the accuracy of our estimates of wealth inequality in three ways. First, our estimates are consistent with official aggregate data for the same period from Statistics Sweden ("Wealth distribution in Sweden 1997 looking back to 1975", ISSN 1400 - 3147). In these data, the top 10% wealth share in Sweden is reported at 56.7% in 1988 and 58.7% in 1990, with an average of 57.7% between 1988-92. In our data, the average wealth share of the top 10% at the municipality level is 55.1% with a standard deviation of 8.4%. Second, we compare the distributions of the top 10% wealth shares at the municipality level over time (see Table O.A.3 in the online appendix). Importantly, the distributions of top 10% wealth shares using taxable wealth data (1986-1993) look very similar to the distributions during the period 1999-2007 when there was detailed wealth data at market values. Third, we cannot compare top 10% wealth shares based on taxable wealth and market value wealth for the same year during the 1999-2007 period since taxable wealth is only reported for wealthy households since 1994. Instead, we compare the top 10% wealth share for 1993 (using taxable wealth) and 1999 (using wealth at market values) for the same municipality. Despite the use of two different wealth concepts and the time difference of six years, the median difference is only 2.5 percentage points and the interquartile range is 6.9 percentage points. As a comparison, when we compare the top 10% wealth share for the six-year interval of 1999 to 2005 using wealth at market values for both years for the same municipality, the median difference is 2.0 p.p. and the interquartile range is 6.2 p.p.

[7]The wealth rank is the percentile in which the refugee household finds itself in the net wealth distribution among all sampled households in LINDA with the same birth cohort year, regardless of the origin of the household head. Thus, it compares the refugee household to all households in Sweden whose household head had the same age in the year of observation.

analysis, we consider exposure to wealth inequality in a smaller area surrounding the refugee, the parish of initial placement, and we control for parish fixed effects or, alternatively, municipality fixed effects. Parishes represent the smallest administrative and political subdivision in Sweden, and in the year of 2000 there were 2,482 parishes in the country. The median individual lived in a parish with 8,660 inhabitants.[8]

In some empirical exercises we also include characteristics of the immediate neighborhood, proxied by the electoral district. There were approximately 5,700 electoral districts in Sweden, each typically with 200 to 2,000 people. For example, in the city of Stockholm, with a total area of 187.17 sq km, there are 537 electoral districts. This suggests an average size of 590 x 590 m (for a reference case of square electoral districts) in Stockholm.[9] Sizes of electoral districts for other cities can be constructed, confirming the notion of a small neighborhood in a typically much bigger parish.[10]

If college-educated households respond to opportunities for wealth mobility, we would expect wealth inequality exposure to encourage wealth accumulation through risky choices in localities that exhibit relatively greater wealth mobility opportunities, and to be muted in the other localities. We proxy wealth mobility with 1 minus the share of households who were in the top 10% of each municipality's wealth distribution in 1986 and who remained in the top 10% in 1992. We repeat our regression analysis, splitting the sample into municipalities with above- and below-median probability of wealth mobility.

This approach leaves open the possibility that any differential effects are due to supply-side considerations that encourage wealth mobility for the educated rather than exposure responses to wealth inequality. To support our exposure hypothesis, we split the sample into relatively rich and poor neighborhoods (parishes) within a municipality. We also compare the effects of wealth inequality across regions with different prevalence of conspicuous housing assets in the portfolios of the wealthy and then the non-wealthy. In

[8]Whereas the median refugee lived in a parish with 14,148 inhabitants, suggesting more concentration in metropolitan areas.

[9]The average size of electoral districts for a representative Stockholm parish (Hedvig Eleonora) in the inner city with 5-story buildings, depicted in our Figure O.A.2 in the online appendix, is only 274 x 274 m with an average population of 1,368 people.

[10]The implied average size of electoral district is the same for the much smaller city of Lund (25.75 sq km), which has 74 electoral districts. However, a city close to the Arctic Line (Lulea) has 44 electoral districts and an area of 29.09 sq km, implying an average electoral district size of 813 x 813 m. Information about regions and electoral districts in Sweden is available at http://www.scb.se/sv/Hitta-statistik/Regional-statistik-och-kartor/ and at http://val.se.

addition, we examine whether the effects are stronger when refugees were exposed to a larger share of successful neighbors in the initial electoral district, i.e., those who moved up to the top 10% of the municipal wealth distribution or increased their wealth substantially, especially when they were placed in relatively poorer neighborhoods. These are factors that increase the salience of wealth mobility opportunities and make it unlikely that the effect is mainly a supply-side outcome.

We then inspect the channel through which exposure to greater local wealth inequality and opportunities for wealth mobility affects wealth accumulation and the rise in wealth rank. Specifically, we test the effect of initial exposure to wealth inequality on investment in risky real and financial assets and on debt behavior several years later, in the 1999-2007 period. We consider an effect on stockholding, owning a business or practice (self-employment), homeownership, and on the ratio of household debt to labor income. We further test for a channel through adjusting labor market behavior, accumulating human capital after entering, and moving to another municipality within Sweden.

As we go through these exercises, a number of relevant variables appear, in turn, as the dependent variable, Y_{ikm0t}, in our regressions, where i denotes the household, and k the country of origin of the household head:

$$Y_{ikm0t} = \alpha_1 \cdot X_{ikm0t} + \alpha_2 \cdot X_{m0} + \beta \cdot WINEQ_{m0} + \gamma_m + \gamma_k + \gamma_0 + \gamma_t + \epsilon_{ikm0t} \qquad (1)$$

In estimating the causal impact of this early exposure to local wealth inequality, β, we control for various observed characteristics of the household, X_{ikm0t}. These include the age category and gender of the household head, the occupational status (distinguishing between those who are employed, unemployed, retired, or students), the marital status, as well as the household size and adult-children composition.

We introduce a regional fixed effect, γ_m, to account for time-invariant institutional and other environmental features of the region where the refugee was initially placed, i.e., correlated effects that may have been relevant for household choices and later outcomes, as explained above. We are identifying the effect of exposure to local wealth inequality from time variation of the wealth inequality measure over the range of years of initial settlement, 1987 to 1991, when we introduce regional fixed effects for the same region as for wealth inequality (e.g., municipality inequality and municipality fixed effects). When we

instead introduce fixed effects for a larger region than the one we use for wealth inequality, we are identifying exposure effects through time and cross-sectional variation across the smaller regions in the period of refugee allocation.[11]

In order to control for macroeconomic and other time varying aggregate factors, we include further time effects: for the arrival year of the refugee, γ_0, and for the observation year of the endogenous variable, γ_t. Finally, we introduce a fixed effect for the country of origin, γ_k, to capture language and other cultural considerations that may systematically influence refugee outcomes and economic choices, as well as social and professional interactions.

We present OLS regression coefficients when the endogenous variable is continuous, and coefficients from linear probability models when we study participation or unemployment probabilities. As placement in the initial apartment was exogenous to the refugee and implemented by the immigration authorities, we do not need to instrument initial local wealth inequality to isolate the causal effect of interest. For skewed continuous variables, such as wealth and income, that may also include zeros, we adopt the inverse hyperbolic sine (IHS) transformation, which admits an elasticity interpretation for coefficients. We correct standard errors through clustering at the initial (smaller) region level.

3 Exposure to Local Wealth Inequality and Opportunity

3.1 Effects of Initial Local Wealth Inequality

In this section, we present our empirical findings regarding the effect of initial exposure to local wealth inequality on household wealth rank position, and on alternative outcomes, observed about 10 to 20 years later (1999-2007), using the model described in section 2.3. We identify the effects out of the variation in top 10% wealth shares at the municiaplity level across the five arrival years (1987-91) when we introduce municipality fixed effects, and out of this variation as well as cross-sectional variation when we use county fixed

[11] In robustness exercises, we also introduce controls for other time-varying features of the initial municipality, X_{m0}, with $0 \in [1987, ..., 1991]$, namely average wealth, average household income, and income inequality in the initial municipality, so as to avoid that our local wealth inequality measure simply reflects such other potentially relevant factors that were also changing over the refugee arrival period.

effects. The former time variation for each municipality is depicted graphically in Figures O.A.3-O.A.7 by means of successive geographical heat maps of Sweden.

Regardless of which choice we make regarding location fixed effects, we find a strongly statistically significant effect on the wealth rank of those households who had at least a college education, but no statistically significant effect in the less educated subsample (Table I). In terms of economic magnitudes, a one standard deviation increase in the initial wealth inequality at the municipality level to which a better-educated household was exposed upon settlement increases her rank in the birth cohort wealth distribution by 7.2 percentiles 10 to 20 years later (or 2.1 percentiles with county fixed effects), on average.[12] This estimate corresponds to a sizable 24% ((7.2/30)*100) increase in the mean net wealth rank of refugee immigrants (see Table O.A.4 in the online appendix for the descriptive statistics on household outcomes).

We also find a significant positive effect of initial exposure to local wealth inequality on alternative measures of wealth outcomes for the more educated, namely the IHS of net wealth level, the level of net wealth in Swedish Kronor (SEK), and their financial wealth-to-income ratio, but not for those without any college education (Table O.A.5). This differential pattern of significance by education is also observed for yet a different choice of the relevant regions, namely when we consider parish-level initial wealth inequality with either parish fixed effects or municipality fixed effects (Table O.A.6).

There is evidence of non-linearity in the effects. Effects seem to be driven by the response of educated households to particularly high levels of wealth concentration in the top 10% of the local wealth distribution. In Table O.A.7, we have replaced the continuous measure of the top 10% wealth share with (three) quartiles of the size of this share: columns 1 and 2 refer to wealth inequality at the municipality level with municipality fixed effects, while columns 3 and 4 refer to the same wealth inequality measure but with county fixed effects instead.[13] We find that initial exposure to wealth inequality registers significant effects on the subsequent wealth position of refugees in the cohort-based wealth distribution when the top 10% share takes values in the third or fourth quartiles,

[12]To compute the estimated effect of a one standard deviation change in the initial wealth inequality to which the refugee was exposed upon settlement, we need to multiply the coefficient estimate by 0.084, which represents a standard deviation of 8.4 percentage points. When the outcome variable is expressed in IHS, this represents a semi-elasticity.

[13]The wealth concentration observed in different municipalities ranges from 31% to 76%.

i.e., when it falls in the range between 54% and 76% in our data (or in the fourth quartile, in the case of county fixed effects).

3.2 Exposure to Wealth Inequality and Mobility Opportunities

We have so far provided empirical evidence in support of the hypothesis that initial exogenous exposure to local wealth inequality contributes to better wealth outcomes only among the college educated. The remaining part of our hypothesis is that these greater tendencies are generated in response to local opportunities for wealth mobility. In this section, we provide empirical evidence that the responses of the college educated to greater wealth inequality at the start of economic life are only observed in localities that provide considerable (above median) wealth mobility opportunities, but not in others.

As a measure of available wealth mobility opportunities in the initial locality, we compute the share of households who were in the top 10% of the municipality's wealth distribution right before the allocation of refugees started, i.e., in year 1986, and who were also in the top 10% of the wealth distribution right after the allocation of refugees was completed, in year 1992. We find that, across all municipalities, the median value of this share was about 67%. We then distinguish the municipalities of arrival into two groups: those providing considerable wealth mobility opportunities, where the share of the initial wealthy in 1986 that remained in the top 10% of the local wealth distribution in 1992 was below the median of 67%; and those providing limited mobility opportunities, where this share was above the median.

Table II reports that exposure to greater local wealth inequality tends to lead to attainment of higher percentiles in the cohort-based wealth distribution later in life, but this systematic link is present only for the more educated refugees that arrive in municipalities with greater wealth mobility. Quantitatively, a one standard deviation increase in the initial wealth inequality in high mobility areas, to which a better-educated household was exposed upon settlement, increases its rank in the birth cohort wealth distribution by 10.5 percentiles ten to twenty years later, on average.

The crucial importance of wealth mobility opportunities in the initial region raises the issue of whether the effects we observe have to do with exposure to initial wealth inequality or are mere consequences of better local supply-side opportunities for edu-

cated people. In the latter case, educated refugees are transported to high wealth ranks by opportunities for educated people that happened to exist in the region of their initial placement rather than by any reaction to being exposed to greater wealth inequality and wealth mobility. If the effect we are finding is to be traced to great opportunities for wealth generation in the initial municipality, then we would expect to find that it emanates from neighborhoods with relatively higher, rather than lower, average wealth within that municipality. Yet, when we split the sample into higher- and lower-average-wealth subsamples, we find the positive effect of inequality to be present in the poorer subsample and absent in the richer one (Table III).[14] This is so whether we include municipality or county fixed effects, and it is a first indication in support of our hypothesis that it is exposure rather than the supply side that matters for our estimated effects.

Further support for our exposure hypothesis is obtained by examining the role of salience of wealth inequality and mobility for the incoming refugees. Housing is perhaps the most conspicuous form of wealth among households at large. If salience matters, then we would expect our effects to be stronger in areas where the top 10% of the local wealth distribution have a relatively high housing share in their total wealth. We therefore split the municipalities into two subsamples based on the share of wealth held in housing by the top 10% of the wealth distribution. We find that the positive effect of initial wealth inequality found in the full sample of municipalities actually emanates in the subsample with above-median share of housing among the top 10% of the municipality wealth distribution (Table IV). We verify the robustness of this finding using alternative definitions of household wealth, as shown in Table O.A.8.

Now, this may raise the suspicion that we are uncovering a supply-side effect of a different nature, namely a link between supply-side factors that favor housing and wealth accumulation. If this were a case of municipalities with excellent housing investment opportunities, we would expect such municipalities to exhibit higher housing shares across the wealth distribution, both in the top 10% and in the other 90%. Yet, when we split the municipalities into two subsamples, based on the housing wealth share of the bottom 90% of the wealth distribution, we find that the effect is present in both municipality subsamples, and it is actually estimated to be stronger in the municipalities with below-median

[14] Rich (poor) neighborhoods are defined as those parishes within a municipality where the median wealth is above (below) the median level of wealth in that municipality.

housing shares among the bottom 90% of the wealth distribution (Table O.A.9).

Considering other forms of salience provides further support for the role of peer effects and exposure. We test next whether effects are stronger for refugees placed in areas with a bigger share of upward-mobile neighbors, making wealth mobility opportunities more salient for them. Such mechanisms would be consistent with findings in the peer effects literature (Duflo and Saez, 2003; Bursztyn et al., 2014; Beshears et al., 2015), whether through social learning, imitation, or other mechanisms that we do not directly observe. One potential concern is that the share of neighbors who became wealthy may simply reflect underlying economic opportunities rather than peer effects. If this were the case, we would expect the effect to be strongest in wealthier parishes, where financial development and entrepreneurial opportunities are more prevalent. However, if the observed patterns are driven by salience and peer effects, we would expect stronger effects in poorer parishes, where upward mobility is more unexpected and therefore more salient.

In a first test, we compute the share of initial neighbors living in the same immediate neighborhood (electoral district) as the refugees, who moved from the bottom 90% to the top 10% of the municipal wealth distribution over the period 1986-92. When we include this share, as well as parish fixed effects, we find that the share of initial neighbors that got rich has an effect on the longer-term wealth rank of refugees that were initially placed in the relatively poorer but not in the richer parishes of a municipality (Table V). We find a similar pattern for the level (IHS) of net wealth (Table O.A.10). No effect is observed on wealth outcomes of the less educated, regardless of where they were placed. Finally, note that in these regressions we also include the (log) change in median wealth in the initial electoral district between 1986 and 1992 as well as the share of households in the initial electoral district who moved up at least one decile in the municipal wealth distribution from 1986 to 1992.

We also consider an alternative measure of salience of local wealth mobility opportunities, namely the size of wealth increases that successful neighbors experienced in the period of refugee arrivals, in conjunction with the average wealth in the area. We compute the share of neighbors living in the electoral district of initial assignment whose change in net wealth between 1986 and 1992 exceeded SEK 568,200, i.e., the 90th percentile increase in net wealth among those who experienced an increase in wealth during the period of

placement. When we include this measure, together with parish fixed effects, we find a positive and statistically significant effect of exposure to successful neighbors (Table O.A.11). Once again, this effect in the overall sample emanates from the poor parishes and is not present in the rich parishes.[15]

All in all, effects of initial wealth inequality on the educated refugees were observed in poorer areas that exhibited salient peer examples of upward wealth mobility to destitute refugees about to start their careers in the country.

4 Inspecting the Channel

In this section, we examine the channel through which arriving refugees translated their exposure to greater local wealth inequality and opportunities for wealth mobility into actions that led them to higher positions in the wealth distribution 10 to 20 years later. We examine, in turn, responses related to their risky asset choices, their debt behavior, their labor market outcomes, their post-arrival investments in human capital, and their relocation to areas of greater opportunity.

4.1 Undertaking Financial and Real Risks

Part of our original hypothesis, that we now test, is that the educated refugees' higher wealth position in the medium run are mediated through greater participation in financial and real risks. One possible response is to undertake greater private risk through entrepreneurship, or self-employment more generally. Indeed, Roussanov (2010) showed that investing in a private business would be an optimal response to relative wealth concerns, in an objective not just to keep up or catch up with the "Joneses", but actually to "beat" them. Such a motive encourages one to engage in private risk, so as to get rich alone, if things do work out. This need not only apply to entrepreneurs but also to self-employed professionals, such as lawyers or medical doctors.

[15]Note that in these regressions we also control for the (log) change in median wealth in the initial electoral district between 1986 and 1992 as well as the share of households in the initial electoral district whose change in net wealth between 1986 and 1992 exceeded SEK 165,700, i.e., the median increase in wealth among those who experienced an increase during the period of placement.

In our data, we observe self-employment as a whole, without distinguishing between entrepreneurs and private practitioners. Panel A of Table VI reports estimates of the effect of exposure to local wealth inequality on the probability of being self-employed, by level of education. We find a significant effect of initial exposure to municipality wealth inequality on the likelihood of being self-employed among the educated refugees when we control for municipality fixed effects. The estimated effect is still positive, but not statistically significant, when we include county fixed effects instead. This pattern of significance persists when we distinguish between municipalities with higher and lower wealth mobility.[16]

Equities offer another means of wealth creation: they are much more widely accessible than private businesses or practices, they do not require large investments or large downside risks, and they offer greater opportunities for risk diversification.[17] Panel B of Table VI presents estimates of the effect of initial exposure to local wealth inequality on the probability of households to be holding stocks, directly or indirectly through funds, in their portfolio later in life. Our estimates suggest that the college educated who were exposed to greater wealth inequality in the municipality of their initial placement were systematically more likely to be holding stocks in the medium to longer run, regardless of whether we control for municipality or county fixed effects.

Housing represents the primary saving instrument for most households, as described in Goodman and Mayer (2018). A home is a real asset offering services to homeowners, an important component of wealth for most, and it can also be a source of status associated with relative wealth. Panel C of Table VI reports estimates of the role that exposure to wealth inequality in the municipality of initial placement plays in homeownership observed in the medium to longer run, controlling for marital and occupational status, age, and household size, in addition to the full set of fixed effects. These estimates suggest that the college educated who were exposed to greater wealth inequality in the municipality of their initial placement were systematically more likely to be homeowners, regardless of whether we control for municipality or county fixed effects.

[16]The tendency for greater initial wealth inequality to promote the chances of subsequent self-employment is present in both municipality subsamples, but is estimated to be greater in the mobile regions (Tables O.A.12 and O.A.13).

[17]Indeed, household-level survey data for the US show that stocks and mutual funds comprise a much bigger part of the portfolios of college graduates than of any other education category (see Fig. O.A.8).

When we split the sample by wealth mobility in the initial municiaplity, the responsiveness of the more educated in terms of stock- and homeownership in the mobile regions and the unresponsiveness of the less educated remain, regardless of the configuration of regional fixed effects.[18] Finally, when splitting the parishes within each municipality into those that are relatively "rich", in the sense of having above-median average level of household wealth for that municipality, and those that are relatively "poor" in the same sense, we find that the effects emanate from the relatively poorer parishes.[19]

Taken together, our baseline estimates support our hypothesis that exposure to greater local wealth inequality and wealth mobility opportunity at career launch led those with at least some college education to take on more financial and real risk, while it failed to have a similar effect on those without any college education. The tendency of the less educated to participate in risky financial or real assets appears to be unresponsive to the wealth inequality and wealth mobility opportunity they experienced.

4.2 Debt Moderation

While participation in risky assets is expected to generate higher returns, debt moderation has more ambiguous effects. On the one hand, a lower debt burden may contribute to higher net worth and to avoiding risks of financial instability in the household. On the other hand, a more limited use of debt may hinder the holding of risky assets for which the household has limited resources (e.g., housing). Table O.A.16 shows that when we do not include controls for the refugee's position in the wealth distribution at the time of the financial behavior observation, we estimate a significant effect of initial local wealth inequality on the debt-to-income ratio, which is positive for the educated and negative for the less educated. However, controlling for the refugee's later position in the wealth distribution renders the effect insignificant for the educated, while still showing a debt-reducing effect for the less educated. We conclude that the amplifying effect of initial exposure to wealth inequality on the later wealth position of educated refugees is exerted

[18] See Tables O.A.12 and O.A.13. The specification with county fixed effects shows some responsiveness of the educated also in the low-mobility municipalities, as well as a discouragement effect on homeownership of the less educated in these regions.

[19] See Tables O.A.14 and O.A.15. The self-employment regression also registers an encouragement effect for the less educated in poorer areas, but this fails to propel them to higher wealth levels, as we have seen in the benchmark regressions.

through their response to risky asset accumulation rather than through adjustments in their debt behavior.

4.3 Finding Well-paying and Secure jobs

A plausible additional response to facing greater local wealth inequality and experiencing greater wealth mobility is to seek jobs that offer higher future income levels and greater job security as a way of facilitating wealth accumulation and climbing to a higher place in one's cohort's wealth distribution. Whether or not this was also an objective of educated refugees exposed to greater local wealth inequality and mobility, we have found no evidence in our data that this channel from wealth inequality to higher labor income and job security is operative. On the contrary, our results in Table VII suggest that exposure to greater wealth inequality did not systematically lead to higher labor income (top panel) or lower probability of unemployment (bottom panel) in the medium to long run, even for the more educated population. Tables O.A.17 and O.A.18 confirm the absence of an effect in both high- and low-wealth-mobility regions for income level and unemployment risk, respectively.

We explore this issue further by splitting the parishes within each municipality into those that are relatively "rich", in the sense of having above-median average level of household wealth for that municipality, and those that are relatively "poor" in the same sense. We might imagine that the possibility to find a high-paying, secure job would be greater in rich areas, and that this would allow the refugees to pursue this objective as part of their response to wealth inequality. We do not find that initial wealth inequality leads to systematically different levels of subsequent labor income or unemployment risk in either rich or poor parishes (see Tables O.A.19 and O.A.20, respectively).

4.4 Investment in Human Capital Accumulation

Since the education split matters for our proposed propagation mechanism, it is natural to ask if exposure to wealth inequality and mobility triggered a response in terms of human capital accumulation. We, therefore, distinguish between education obtained prior to arriving in Sweden and that obtained after being exposed to the initial municipality.

Out of the 5,031 household heads (by the Canberra definition) we include in our sample,[20] 1,261 (or 25% of the total) added at least one year of education between arrival and year 2000, the latter being the reference year we use for our education sample splits. At least half of those who pursued education after arrival were 25 years of age or younger when they arrived in Sweden.[21]

We examine whether exposure to initial local wealth inequality significantly influenced the number of years of schooling accomplished between individual arrival and year 2000, controlling for demographics at time of arrival, and for fixed effects of municipality, arrival year, and of cultural factors proxied by country of origin. As Panel B of Table VIII shows, our estimates do not support a systematic role of initial exposure to local wealth inequality in determining the size of investment in human capital after arrival in Sweden.

4.5 Relocation

Our benchmark findings highlight the importance of local opportunities for wealth mobility for the subsequent wealth rank and level of the educated subsample. This may sound like a purely mechanical effect: people cannot improve their wealth position in areas where wealth mobility is limited. However, the educated refugees who were exposed to greater wealth inequality in less mobile regions might eventually move to more mobile regions as part of their goal of attaining higher wealth positions. We already know from Section 2.1 that the average time spent by a refugee household in the initial municipality was 7.8 years, and that about 60% of refugees had moved to other municipalities by the year 2000. However, it is not a priori clear whether their relocation was systematically related to their initial exposure to local wealth inequality or motivated by other factors, such as preference shocks or life events.

To shed light on these issues, we define an indicator variable for whether the household moved to another municipality by the year 2000 and regress this variable on the

[20] We exclude from our main sample a small number of observations that do not state educational attainment both at arrival and in year 2000.

[21] The data include a few negative observations, which represent downgrading of educational qualifications after proper examination of their level by the Swedish authorities. We have set those to zero, as they do not represent investment in human capital.

level of wealth inequality in the initial municipality, household controls defined at the time of arrival, and the benchmark fixed effects. The regression results for the full, better educated, and less educated samples are reported in Panel C of Table VIII. As shown in column (1), we do not observe a significant effect of initial wealth inequality on the subsequent relocation decisions of households in the full sample. When we split the sample by educational attainment (see columns (2) and (3)), we also find insignificant effects. Thus, whatever relocation the refugees undertook by the end of the century was not part of a systematic response to the inequality of wealth to which they were initially exposed.

4.6 Wealth Inequality as a Proxy for Other Factors

Finally, we consider whether wealth inequality is simply proxying for potentially relevant but omitted time-varying municipality characteristics. Panel A of Table VIII introduces as additional controls key time-varying characteristics of the municipality of initial placement. These include the average wealth, average income, and local income inequality, proxied by the Palma ratio. We see that wealth inequality in the municipality at the time of the initial placement continues to have a statistically significant, positive effect on the subsequent tendency to undertake self-employment, stockholding, and homeownership, with only one exception (self-employment when we also introduce county fixed effects).

Taken together, the findings in this section so far suggest that refugees' actions in response to exposure to greater local wealth inequality and opportunities for wealth mobility primarily involve participation in financial and real risks, rather than seeking jobs with higher income or greater job security, investing in additional education, or relocating to other municipalities in pursuit of opportunities for wealth mobility. If so, the observed unresponsiveness of the less educated is likely to be related to the problems they face in managing financial and real risks without being destroyed by them. We now turn to this issue.

4.7 The Unresponsiveness of the Less Educated

This section explores some possible reasons for unresponsiveness of the less educated, that are relevant for designing policies to contain the propagation mechanism we uncover. A number of recent studies find a positive link between educational attainment

and the level of returns on wealth and on its components. A close positive correlation between educational attainment and returns on net wealth and on each of its main subcomponents is found by Girshina (2019) in Swedish data and by Fagereng et al. (2020) using data from Norway, while Barth et al. (2020) find a positive relation between educational attainment and retirement wealth among US households. In addition to limited ability, there is evidence that individuals of lower socio-economic status tend to form more pessimistic expectations of stock returns, and this discourages them from participating (Kuhnen and Miu, 2017).

If limited ability to generate wealth, combined with pessimism, is an important issue for the less educated, we would expect it to manifest itself even in areas of high wealth mobility specifically among the less educated. For this purpose, we split municipalities based on the (above- or below-median) wealth mobility of those without college education in particular. In unreported regressions, we find that the less educated in areas with high mobility for them are significantly more likely to enter into self-employment, but no more or less likely to invest in risky financial or housing assets. However, despite this greater tendency of the less educated to engage in self-employment, their exposure to greater inequality does not translate into higher levels of subsequent wealth or higher position in the cohort-specific wealth distribution. This suggests that, even when mobility opportunities are available to the less educated and some response in self-employment is registered, they fail to use the full range of opportunities effectively, so as to boost their wealth level and position in the wealth distribution.

Is education an independent causal factor for higher wealth returns among the more educated? Here views differ. Girshina (2019) uses three alternative instruments, namely family background and ability, within-siblings variation in educational attainment, and a reform of compulsory schooling to argue for a causal effect of education. Fagereng et al. (2020) employ an exogenous increase in schooling requirements from 7 to 9 years and show that, in their data, the correlation between educational attainment and returns disappears in instrumental-variable estimation. They argue that the positive relation between education and returns reflects a correlation between innate wealth management ability and educational attainment, with the former being ultimately responsible for the higher returns to wealth and its components. Barth et al. (2020) find that average US household polygenic scores (predictive indices aggregating multiple genetic markers) ro-

bustly predict educational attainment as well as retirement wealth in the US Health and Retirement Survey. Higher polygenic score households are found to be more likely to invest in stocks and in private businesses.

The ongoing debate about whether educational attainment is an independent factor that creates opportunities for more profitable participation in risky assets and eventual wealth creation, or a joint outcome of innate abilities to manage wealth, is important for whether expanding compulsory education per se is part of the arsenal to mitigate the source of propagation of wealth inequality that we find. While the precise reasons for the unresponsiveness of the less educated to wealth inequality and mobility are a useful area for future research, our findings suggest that it is worthwhile to explore ways to empower less-educated households to take financial and real risks without being destroyed by them as a means of combating the propagation of wealth inequality.

5 Conclusions

This paper tests our empirically motivated hypothesis that the more educated, when exposed to greater local wealth inequality and opportunities for wealth mobility at the start of their careers, tend to interpret inequality and mobility as an indication of what they can achieve and take risks that eventually lead them to higher wealth positions and levels, while the less educated tend to remain unresponsive.

Using a refugee allocation program in Sweden over the period 1987-1991, the paper tests this hypothesis by examining whether and how exposure to local wealth inequality and wealth mobility at the start of one's economic life tends to influence economic and financial behavior and outcomes 10 to 20 years later.

We find that initial exposure to greater local wealth inequality or co-existence of richer and poorer households, whether at the municipality level or at the smaller parish level, leads to higher wealth levels and cohort-specific wealth rank for the college-educated refugees, while failing to trigger similar effects for the less educated. Effects are observed in municipalities with above-average wealth mobility, while effects are largely absent for the less educated, regardless of the degree of mobility.

We provide evidence that this differential outcome by education is not merely a product of supply-side conditions favoring wealth creation by the educated, but is related to

the salience of observations made by the educated. The effects emerge in neighborhoods of municipalities with lower average wealth and in municipalities where housing is a relatively important component of the portfolios of the rich. We also find that the effects are stronger when the educated are located in a small neighborhood (electoral district) with more successful neighbors, whether this is proxied by the share of wealth-mobile neighbors or by the share of neighbors who experienced a significant increase in wealth. Again, these effects originate in the relatively poorer neighborhoods, where they are more noticeable.

We then examine the operational channels. We find a positive effect of initial exposure to wealth inequality on the participation of the educated in risky financial and real assets and on the risky occupational choice of self-employment, but not on debt moderation. We find no relationship between exposure to local wealth inequality and having found a better paying or more secure job ten to twenty years later. Nor do we find an operational channel through further investment in human capital or through moving in search of opportunity.

What should we make of the tendency of some to be unresponsive to greater wealth inequality and wealth mobility opportunities? We find that the less educated do not respond to wealth inequality, even in areas where mobility opportunities are greater for them. Their lack of response is likely due to a combination of more limited ability to earn higher returns from risky financial and real assets and related pessimism.

The differential response to wealth inequality at career entry tends to propagate wealth inequality, increasing the share of the better educated at the top of the wealth distribution and validating their financial and economic choices. While redistributive wealth taxation distorts incentives for risk-taking, empowering the less educated to perceive opportunities for wealth mobility and to generate higher returns could be an important component of a different strategy to limit propagation. To be successful, such a strategy is unlikely to rely on extending compulsory schooling, which may not be causal. More promising may be a multi-pronged approach that improves the perception of opportunity among the less educated and their ability to earn higher returns by participating in risky assets without being destroyed by the risk involved.

References

Altmejd, Adam, Thomas Jansson, and Yigitcan Karabulut (2024). Business education and portfolio returns. *Available at SSRN 4280536*.

Åslund, Olof, Per-Anders Edin, Peter Fredriksson, and Hans Grönqvist (2011). Peers, neighborhoods, and immigrant student achievement: Evidence from a placement policy. *American Economic Journal: Applied Economics 3*(2), 67–95.

Åslund, Olof and Peter Fredriksson (2009). Peer effects in welfare dependence: Quasi-experimental evidence. *Journal of Human Resources 44*(3), 798–825.

Bach, Laurent, Laurent E. Calvet, and Paolo Sodini (2020). Rich pickings? risk, return, and skill in household wealth. *American Economic Review 110*(9), 2703–2747.

Barth, Daniel, Nicholas W. Papageorge, and Kevin Thom (2020). Genetic endowments and wealth inequality. *Journal of Political Economy 128*(4), 1474–1522.

Bartscher, Alina K., Moritz Kuhn, and Moritz Schularick (2020). The college wealth divide: Education and inequality in america, 1956-2016. *Federal Reserve Bank of St. Louis Review 102*(1), 19–49.

Bénabou, Roland and Jean Tirole (2006). Belief in a just world and redistributive politics*. *Quarterly Journal of Economics 121*(2), 699–746.

Benhabib, Jess and Alberto Bisin (2018). Skewed wealth distributions: Theory and empirics. *Journal of Economic Literature 56*(4), 1261–1291.

Benhabib, Jess, Alberto Bisin, and Mi Luo (2019). Wealth distribution and social mobility in the US: A quantitative approach. *American Economic Review 109*(5), 1623–1647.

Benhabib, Jess, Alberto Bisin, and Shenghao Zhu (2011). The distribution of wealth and fiscal policy in economies with finitely lived agents. *Econometrica 79*(1), 123–157.

Beshears, John, James J Choi, David Laibson, Brigitte C Madrian, and Katherine L Milkman (2015). The effect of providing peer information on retirement savings decisions. *Journal of Finance 70*(3), 1161–1201.

Bursztyn, Leonardo, Florian Ederer, Bruno Ferman, and Noam Yuchtman (2014). Understanding mechanisms underlying peer effects: Evidence from a field experiment on financial decisions. *Econometrica 82*(4), 1273–1301.

Calvet, Laurent E, Claire Celerier, Paolo Sodini, and Boris Vallee (2023). Can security design foster household risk-taking? *Journal of Finance 78*(4), 1917–1966.

Chetty, Raj and Nathaniel Hendren (2018a). The impacts of neighborhoods on intergenerational mobility i: Childhood exposure effects. *Quarterly Journal of Economics 133*(3), 1107–1162.

Chetty, Raj and Nathaniel Hendren (2018b). The impacts of neighborhoods on intergenerational mobility ii: County-level estimates. *Quarterly Journal of Economics 133*(3), 1163–1228.

Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz (2016). The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment. *American Economic Review 106*(4), 855–902.

Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez (2014). Where is the land of opportunity? the geography of intergenerational mobility in the united states. *Quarterly Journal of Economics 129*(4), 1553–1623.

Chetty, Raj, Nathaniel Hendren, Patrick Kline, Emmanuel Saez, and Nicholas Turner (2014, May). Is the united states still a land of opportunity? recent trends in intergenerational mobility. *American Economic Review 104*(5), 141–47.

Das, Sreyoshi, Camelia M. Kuhnen, and Stefan Nagel (2019). Socioeconomic Status and Macroeconomic Expectations. *Review of Financial Studies 33*(1), 395–432.

De Nardi, Mariacristina and Giulio Fella (2017). Saving and wealth inequality. *Review of Economic Dynamics 26*, 280–300.

Derenoncourt, Ellora (2022). Can you move to opportunity? evidence from the great migration. *American Economic Review 112*(2), 369–408.

Duflo, Esther and Emmanuel Saez (2003). The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. *Quarterly Journal of Economics 118*(3), 815–842.

Edin, Per-Anders, Peter Fredriksson, and Olof Åslund (2003). Ethnic enclaves and the economic success of immigrants - evidence from a natural experiment. *Quarterly Journal of Economics 118*(1), 329–357.

Fagereng, Andreas, Luigi Guiso, Martin Holm, and Luigi Pistaferri (2020). K-returns to education. Working paper.

Fagereng, Andreas, Luigi Guiso, Davide Malacrino, and Luigi Pistaferri (2020). Heterogeneity and persistence in returns to wealth. *Econometrica 88*(1), 115–170.

Gabaix, Xavier, Jean-Michel Lasry, Pierre-Louis Lions, and Benjamin Moll (2016). The dynamics of inequality. *Econometrica 84*(6), 2071–2111.

Girshina, Anastasia (2019). Wealth, savings, and returns over the life cycle: the role of education. Technical report.

Gomes, Francisco, Michael Haliassos, and Tarun Ramadorai (2021). Household finance. *Journal of Economic Literature 59*(3), 919–1000.

Goodman, Laurie S. and Christopher Mayer (2018). Homeownership and the american dream. *Journal of Economic Perspectives 32*(1), 31–58.

Haliassos, Michael, Thomas Jansson, and Yigitcan Karabulut (2017). Incompatible european partners? cultural predispositions and household financial behavior. *Management Science 63*(11), 3780–3808.

Haliassos, Michael, Thomas Jansson, and Yigitcan Karabulut (2020). Financial literacy externalities. *Review of Financial Studies 33*(2), 950–989.

Kuchler, Theresa and Johaness Stroebel (2021). Social finance. *Annual Review of Financial Economics 13*, 37–55.

Kuhnen, Camelia M. and Andrei C. Miu (2017). Socioeconomic status and learning from financial information. *Journal of Financial Economics 124*(2), 349–372.

Ludwig, Jens, Greg J Duncan, Lisa A Gennetian, Lawrence F Katz, Ronald C Kessler, Jeffrey R Kling, and Lisa Sanbonmatsu (2013). Long-term neighborhood effects on low-income families: Evidence from moving to opportunity. *American Economic Review 103*(3), 226–231.

Lusardi, Annamaria, Olivia Mitchell, and Pierre-Carl Michaud (2017). Optimal financial knowledge and wealth inequality. *Journal of Political Economy 125*(2), 431–477.

Malmendier, Ulrike and Stefan Nagel (2011). Depression babies: Do macroeconomic experiences affect risk taking? *Quarterly Journal of Economics 127*(1), 373–416.

Phillips, L T, Stephanie J Tepper, Daniela Goya-Tocchetto, Shai Davidai, Nailya Ordabayeva, M. Usman Mirza, Barnabas Szaszi, Martin V Day, Oliver P Hauser, and Jon Jachimowicz (2020, Sep). Inequality in people's minds. Working paper, Psyarxiv.

Piketty, T. (2014). *Capital in the Twenty-First Century*. Harvard University Press.

Roussanov, Nikolai (2010). Diversification and its discontents: Idiosyncratic and entrepreneurial risk in the quest for social status. *Journal of Finance 65*(5), 1755–1788.

Rustichini, Aldo, William G. Iacono, James J. Lee, and Matt McGue (2023). Educational attainment and intergenerational mobility: A polygenic score analysis. *Journal of Political Economy 131*(10), 2724–2779.

Suss, Joel H. (2021). Measuring local, salient economic inequality in the UK. Working paper.

Table I: The Long-Shadow Effects of Exposure to Regional Wealth Inequality on Household Wealth

This table reports coefficient estimates from OLS regressions of household net wealth rank. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Better-educated	Less-educated	Better-educated	Less-educated
	Net Wealth Rank			
	(1)	(2)	(3)	(4)
Initial wealth inequality	85.741***	-10.342	25.381***	-0.006
	(3.11)	(-0.81)	(2.75)	(-0.00)
Observations	13,918	31,979	13,918	31,979
R-squared	0.2471	0.2001	0.1687	0.1666
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

Table II: The Long-Shadow Effects of Exposure to Regional Wealth Inequality on Household Wealth: The Role of Regional Wealth Mobility

This table reports coefficient estimates from OLS regressions of household net wealth rank by the degree of regional wealth mobility defined at the municipality level. Wealth mobility is defined as 1 minus the share of households who were in the top 10% of each municipality's wealth distribution in 1986 and who remained in the top 10% in 1992. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: High Wealth Mobility Regions			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	124.963***	-0.295	53.147***	-4.866
	(3.56)	(-0.02)	(4.07)	(-0.83)
Observations	7,323	17,523	7,323	17,523
R-squared	0.2619	0.2074	0.1955	0.1749
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel B: Low Wealth Mobility Regions			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	15.005	-17.679	0.881	2.802
	(0.47)	(-1.04)	(0.06)	(0.36)
Observations	6,595	14,456	6,595	14,456
R-squared	0.2671	0.2068	0.1969	0.1790
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

Table III: The Long-Shadow Effects of Exposure to Regional Wealth Inequality on Household Wealth: The Role of Rich vs. Poor Neighborhoods

This table reports coefficient estimates from OLS regressions of household net wealth rank by the degree of wealth levels defined at the parish level. Rich (poor) neighborhoods are defined as those parishes where the average wealth is above (below) the median level of wealth in that municipality. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: Relatively Rich Neighborhoods			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	29.130	-11.855	-4.498	0.077
	(0.30)	(-0.58)	(-0.17)	(0.01)
Observations	3,648	9,165	3,648	9,165
R-squared	0.1819	0.1740	0.1314	0.1840
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel B: Relatively Poor Neighborhoods			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	93.445***	-3.646	30.239**	6.021
	(3.10)	(-0.22)	(2.53)	(0.91)
Observations	8,731	19,334	8,731	19,334
R-squared	0.2767	0.2141	0.1793	0.1739
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

Table IV: The Long-Shadow Effects of Exposure to Regional Wealth Inequality on Household Wealth: The Role of Conspicuous Wealth

This table reports coefficient estimates from OLS regressions of household net wealth rank by the housing wealth share in the net wealth of the people in the top 10 percent of the regional wealth distribution, defined at the municipality level. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: High Housing Share (among Top 10)			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	135.467***	-3.838	35.513**	-7.618
	(2.80)	(-0.20)	(2.31)	(-1.07)
Observations	7,015	15,912	7,015	15,912
R-squared	0.2603	0.1933	0.1947	0.1659
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel B: Low Housing Share (among Top 10)			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	47.621	-13.043	12.443	5.778
	(1.42)	(-0.88)	(0.90)	(0.85)
Observations	6,903	16,067	6,903	16,067
R-squared	0.2637	0.2234	0.1828	0.1901
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

Table V: The Long-Shadow Effects of Exposure to Successful People: The Salience of Wealth Mobility

This table reports coefficient estimates from OLS regressions of household net wealth rank. Exposure to successful people is defined as the share of neighbors living in the electoral district of assignment who have moved from the bottom 90% of the regional wealth distribution to the top 10% over the period between 1986–1992. Rich (poor) neighborhoods are defined as those parishes where the average wealth is above (below) the median level of wealth in that municipality. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the parish level. We also include the (log) change in median wealth in the initial electoral district between 1986 and 1992 as well as the share of households in the initial electoral district who moved up at least one decile in the municipal wealth distribution from 1986 to 1992. Standard errors are clustered at the electoral district level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: Better-educated		
	Full Sample	Rich Neighborhoods	Poor Neighborhoods
	Net Wealth Rank		
	(1)	(2)	(3)
Exposure to Successful Neighbors	43.131**	-12.947	87.226***
	(2.00)	(-0.23)	(3.43)
Observations	10,167	2,661	6,651
R-squared	0.3686	0.4448	0.3770
Arrival-year FE	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes
Parish FE	Yes	Yes	Yes
Time-year FE	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
	Panel B: Less-educated		
	Full Sample	Rich Neighborhoods	Poor Neighborhoods
	Net Wealth Rank		
	(1)	(2)	(3)
Exposure to Successful Neighbors	-6.539	-11.911	4.821
	(-0.61)	(-0.66)	(0.32)
Observations	24,257	6,770	15,328
R-squared	0.2686	0.3369	0.2563
Arrival-year FE	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes
Parish FE	Yes	Yes	Yes
Time-year FE	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes

Table VI: The Long-shadow Effects of Exposure to Regional Wealth Inequality on Wealth Accumulation Factors: The Role of Risk-taking

This table reports coefficient estimates from OLS regressions of household risk-taking. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: Self-employment			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	0.756***	0.185	0.077	0.112
	(3.05)	(0.95)	(0.60)	(1.42)
Observations	13,918	31,979	13,918	31,979
R-squared	0.1995	0.1466	0.1016	0.1087
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel B: Stock Market Participation			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	0.974**	-0.554	0.579***	0.111
	(2.15)	(-1.61)	(3.25)	(0.90)
Observations	13,918	31,979	13,918	31,979
R-squared	0.2920	0.2057	0.2183	0.1573
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel C: Homeownership			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	1.163***	-0.118	0.478***	-0.055
	(2.79)	(-0.41)	(2.70)	(-0.48)
Observations	13,918	31,979	13,918	31,979
R-squared	0.3415	0.2197	0.2683	0.1751
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

Table VII: The Long-shadow Effects of Exposure to Regional Wealth Inequality on Wealth Accumulation Factors: The Role of the Labor Market

This table reports coefficient estimates from OLS regressions of household labor market outcomes. The regressions control for several factors, including household characteristics, year-of-arrival fixed effects, country-of-origin fixed effects, time-year fixed effects, and neighborhood fixed effects defined at the municipality level (columns (1) and (2)) or county level (columns (3) and (4)). Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

	Panel A: (IHS of) Labor Income			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	0.071	0.129	0.160	0.258
	(0.13)	(0.31)	(0.82)	(1.60)
Observations	13,674	30,794	13,674	30,794
R-squared	0.5339	0.3876	0.4970	0.3649
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
	Panel B: Unemployed			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	-0.317	-0.046	0.076	-0.047
	(-0.68)	(-0.17)	(0.50)	(-0.47)
Observations	13,918	31,979	13,918	31,979
R-squared	0.1614	0.1193	0.0988	0.0866
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes

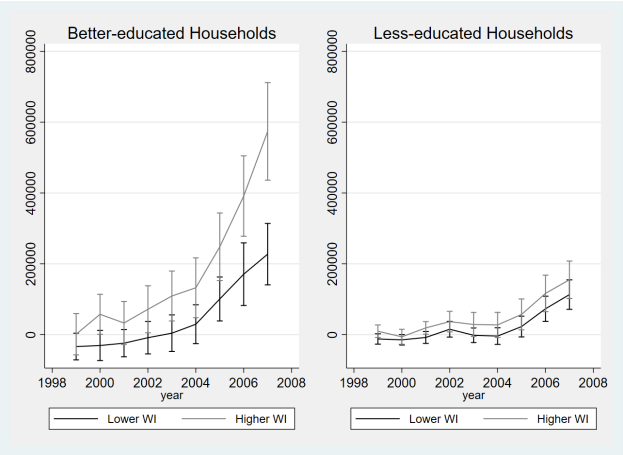
Table VIII: The Long-shadow Effects of Exposure to Regional Wealth Inequality on Household Wealth: Ruling Out Alternative Explanations

Panel A reports coefficient estimates from OLS regressions of household net wealth rank. In addition to the standard controls as described in Table I, we also control for mean net wealth, mean income, and income inequality in the initial municipality of allocation. Panel B presents coefficient estimates from OLS regressions of investments in human capital, where the dependent variable is the changes in years of schooling between year 2000 and year of arrival to Sweden. Panel C reports the coefficient estimates from linear probability model regressions of being a mover, where the dependent variable is an indicator variable that takes the value of 1 if a given household moved away from the initial municipality of allocation to a different municipality as of 2000. In regressions in Panel B and C, we control for household characteristics at time of arrival, arrival-year fixed effects, country-of-origin fixed effects, and neighborhood fixed effects defined at the municipality level. Regional wealth inequality is measured by the share of total wealth held by individuals in the top 10 percent of the regional wealth distribution at the time of initial assignment (1987-1991), measured at the municipality level. Standard errors are clustered at the municipality level, and the corresponding t-statistics are reported in parentheses. The analysis considers a sample of 5,105 refugee immigrant households and examines their net wealth over the period 1999-2007. The better-educated sample includes refugee immigrants with at least some college education, while the less-educated sample consists of refugee immigrants with a high school degree or less. Statistical significance is indicated by *, **, and *** at the 10%, 5%, and 1% levels, respectively. See online Appendix A for detailed definitions of variables.

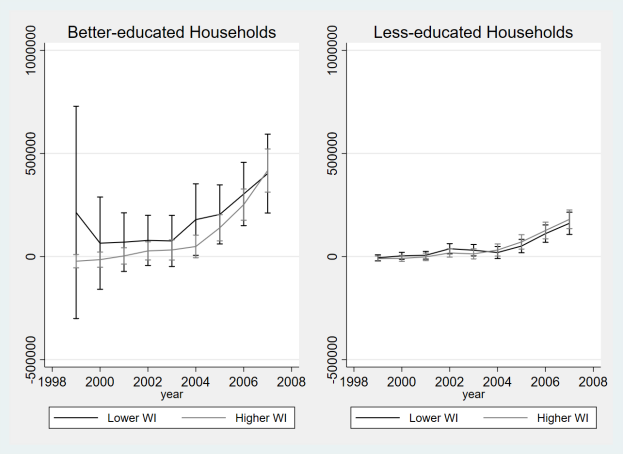
	Panel A: Investment in Human Capital		
	Changes in Year of Schooling (as of 2000)		
	Full Sample	Less-educated	Better-educated
	(1)	(2)	(3)
Initial Wealth Inequality	-1.186	-0.830	-0.977
	(-1.45)	(-0.36)	(-1.23)
Observations	5,031	1,542	3,489
R-squared	0.1373	0.3748	0.1334
Arrival-year FE	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
	Panel B: Decision to Move		
	Mover (as of 2000)		
	Full Sample	Less-educated	Better-educated
	(1)	(2)	(3)
Initial Wealth Inequality	0.334	-0.106	0.633
	(1.01)	(-0.22)	(1.55)
Observations	5,105	1,554	3,551
R-squared	0.3813	0.4125	0.4218
Arrival-year FE	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes
Municipality FE	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
	Panel C: Controlling for Other Regional Characteristics			
	Net Wealth Rank			
	Better-educated	Less-educated	Better-educated	Less-educated
	(1)	(2)	(3)	(4)
Initial wealth inequality	90.039***	-18.472	19.042*	3.335
	(3.18)	(-1.41)	(1.66)	(0.58)
Observations	13,918	31,979	13,918	31,979
R-squared	0.2483	0.2025	0.1698	0.1669
Arrival-year FE	Yes	Yes	Yes	Yes
Country-of-origin FE	Yes	Yes	Yes	Yes
County FE	No	No	Yes	Yes
Municipality FE	Yes	Yes	No	No
Time-year FE	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Wealth, income, and income inequality	Yes	Yes	Yes	Yes

Figure I: Exposure to Wealth Inequality in High vs. Low Mobility Regions

This figure plots the evolution of average net wealth of households during the 1999-2007 period based on their initial assignment to municipalities with relatively high versus low wealth inequality and relative higher versus lower wealth mobility, respectively. In Panel (a), we focus on the average net wealth of better- and less-educated households who were initially assigned to high wealth mobility regions. In Panel (b), we focus on the average net wealth of better- and less-educated households who were initially assigned to low wealth mobility regions.



(a) Exposure to Wealth Inequality in High Mobility Regions



(b) Exposure to Wealth Inequality in Low Mobility Regions